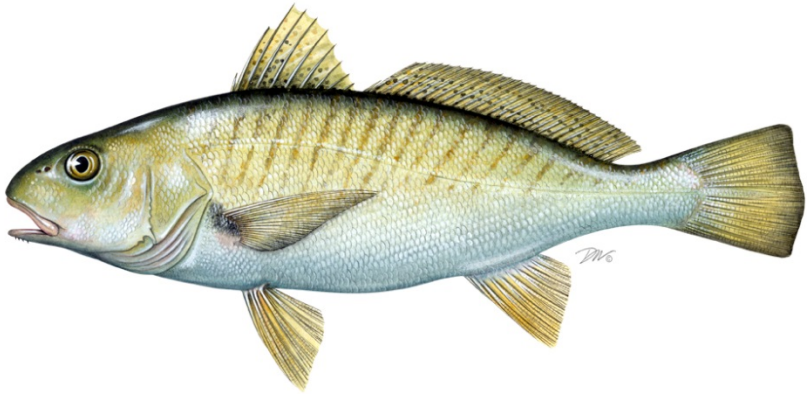
2017 Traffic Light Analysis for Spot and Atlantic Croaker with proposed changes

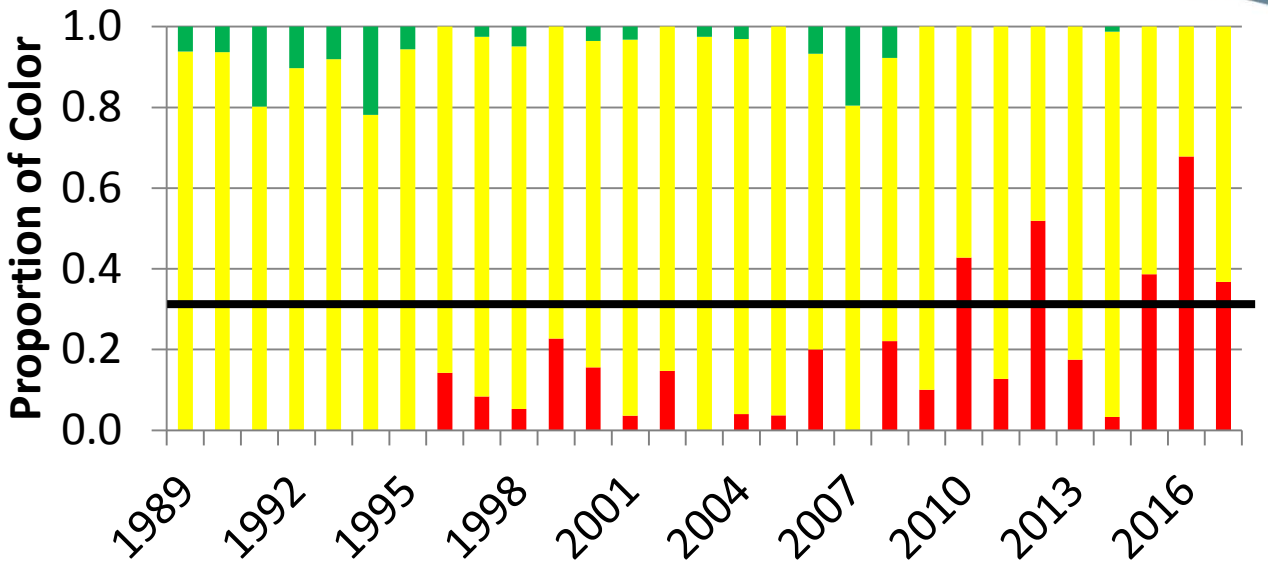
Atlantic States Marine Fisheries Commission
South Atlantic Fisheries Management Board
Summer Meeting: Arlington, Virginia
August 9, 2018



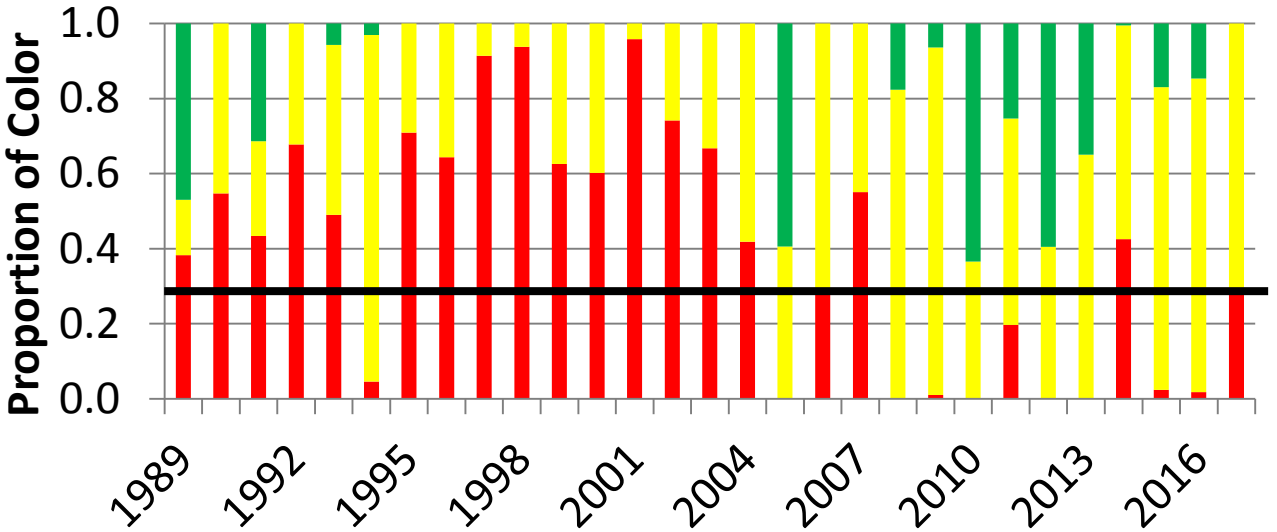
SPOT

2017 TLA for Spot: Harvest and Adult Composite Indices

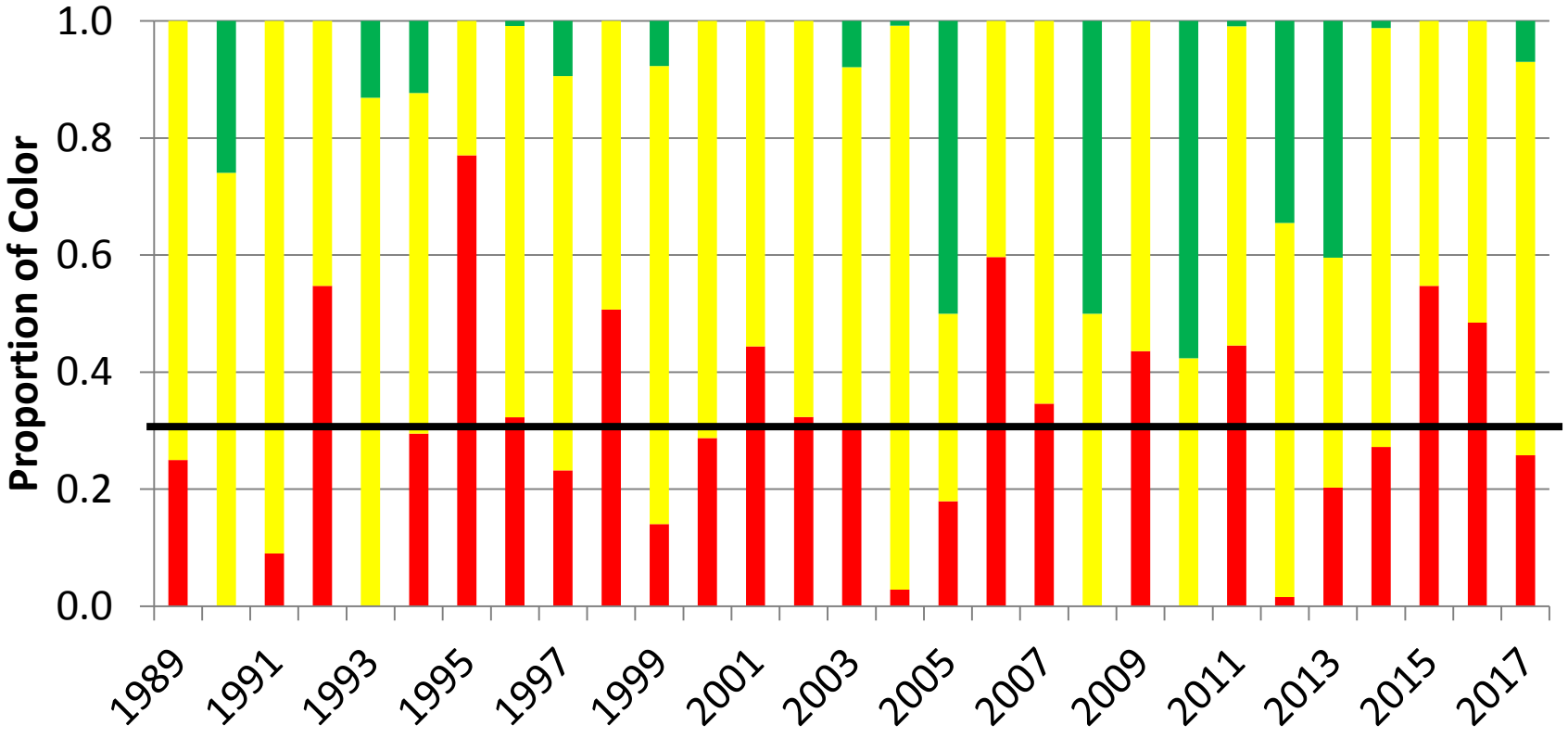
- Harvest composite TLA would have tripped at the 30% threshold in 2017 (second year in a row)



- Adult composite TLA would not have tripped in 2017. I has not tripped since the mid-2000s.

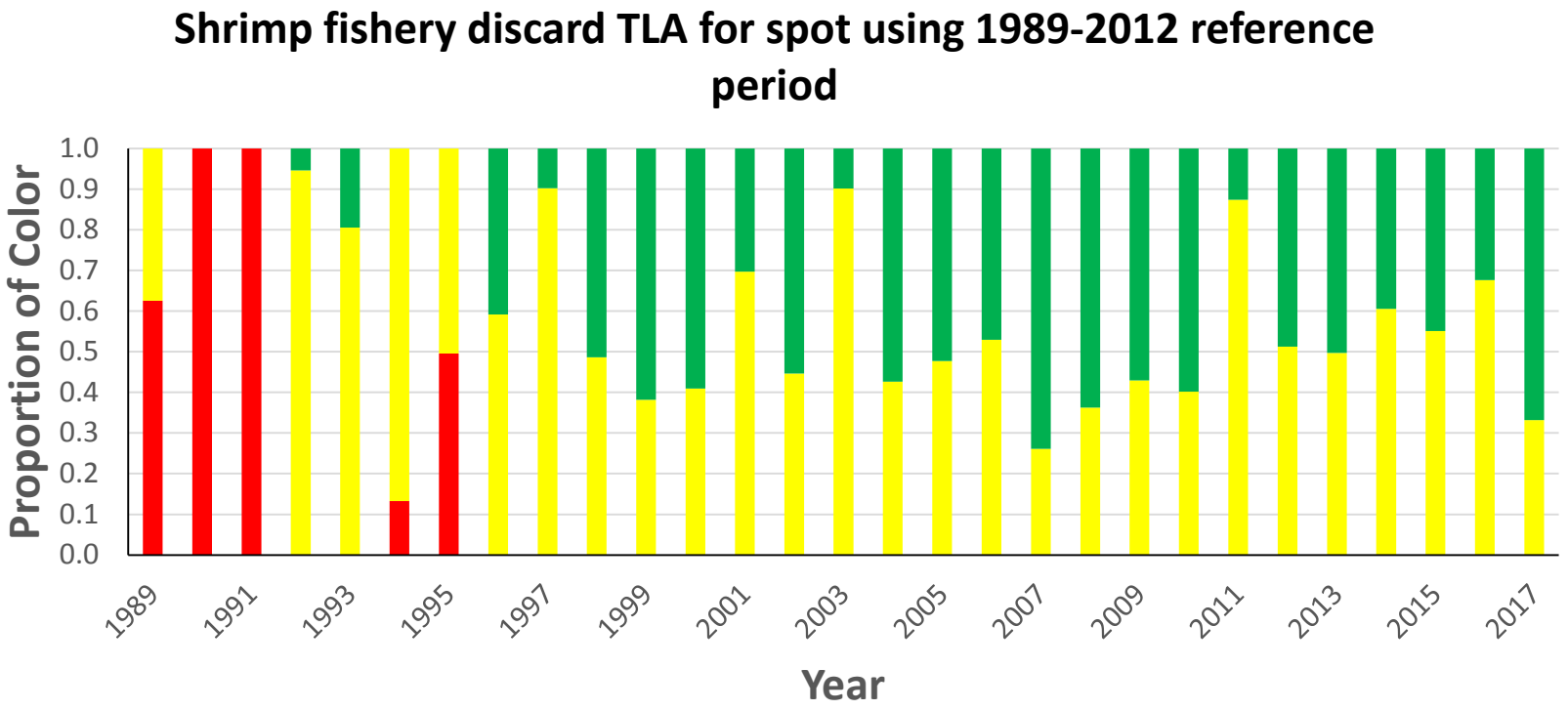


2017 TLA for Spot: Juvenile Composite Index



- The juvenile TLA did not exceed the 30% threshold in 2017, but would have triggered since it exceeded that level in the two previous years.

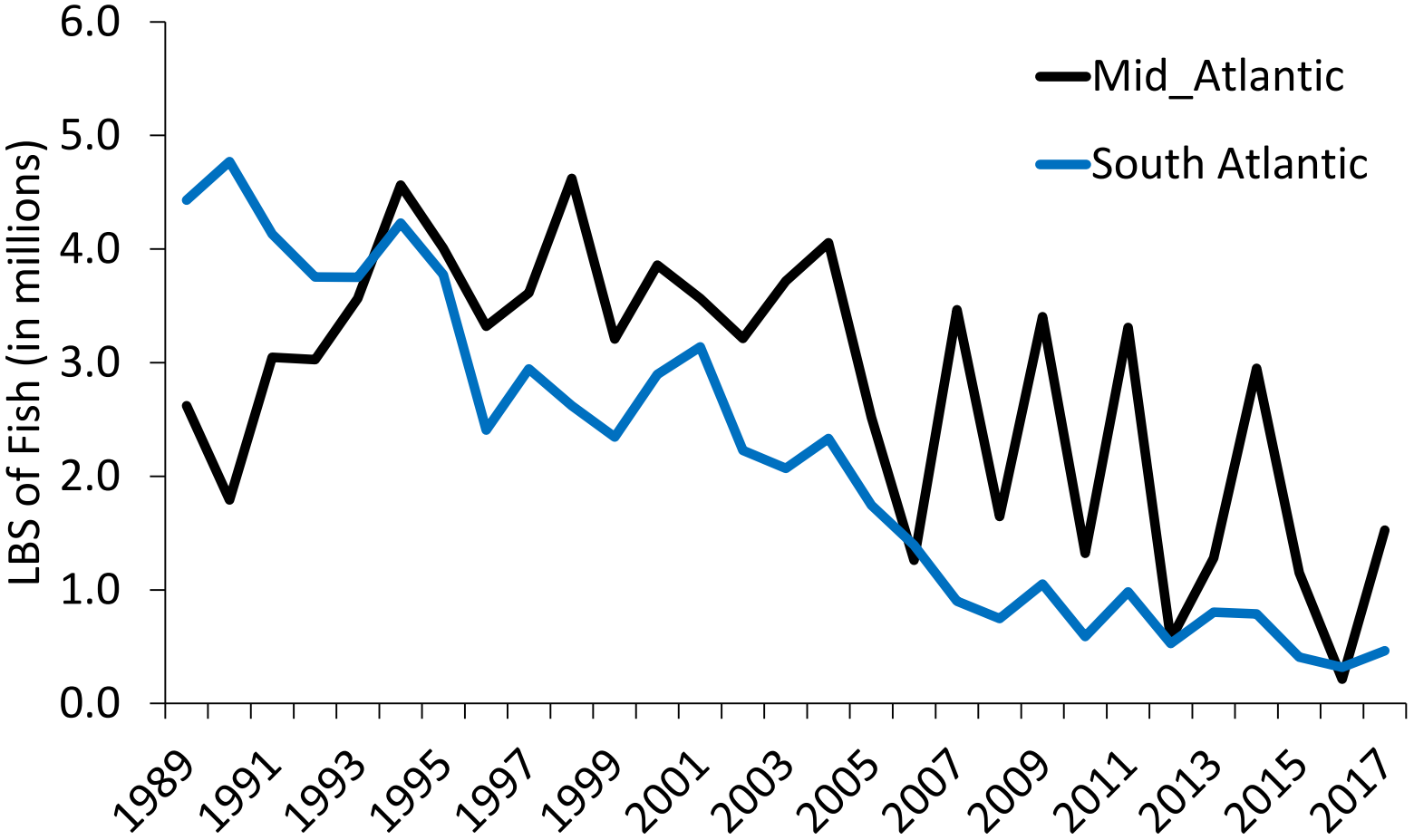
2017 TLA for Spot discards from southern shrimp trawl fishery



- Shrimp trawl discards for spot were not anywhere near triggering using the 1989-2012 reference period.
  - This was due to the high discard levels in the early time frame of the reference period.

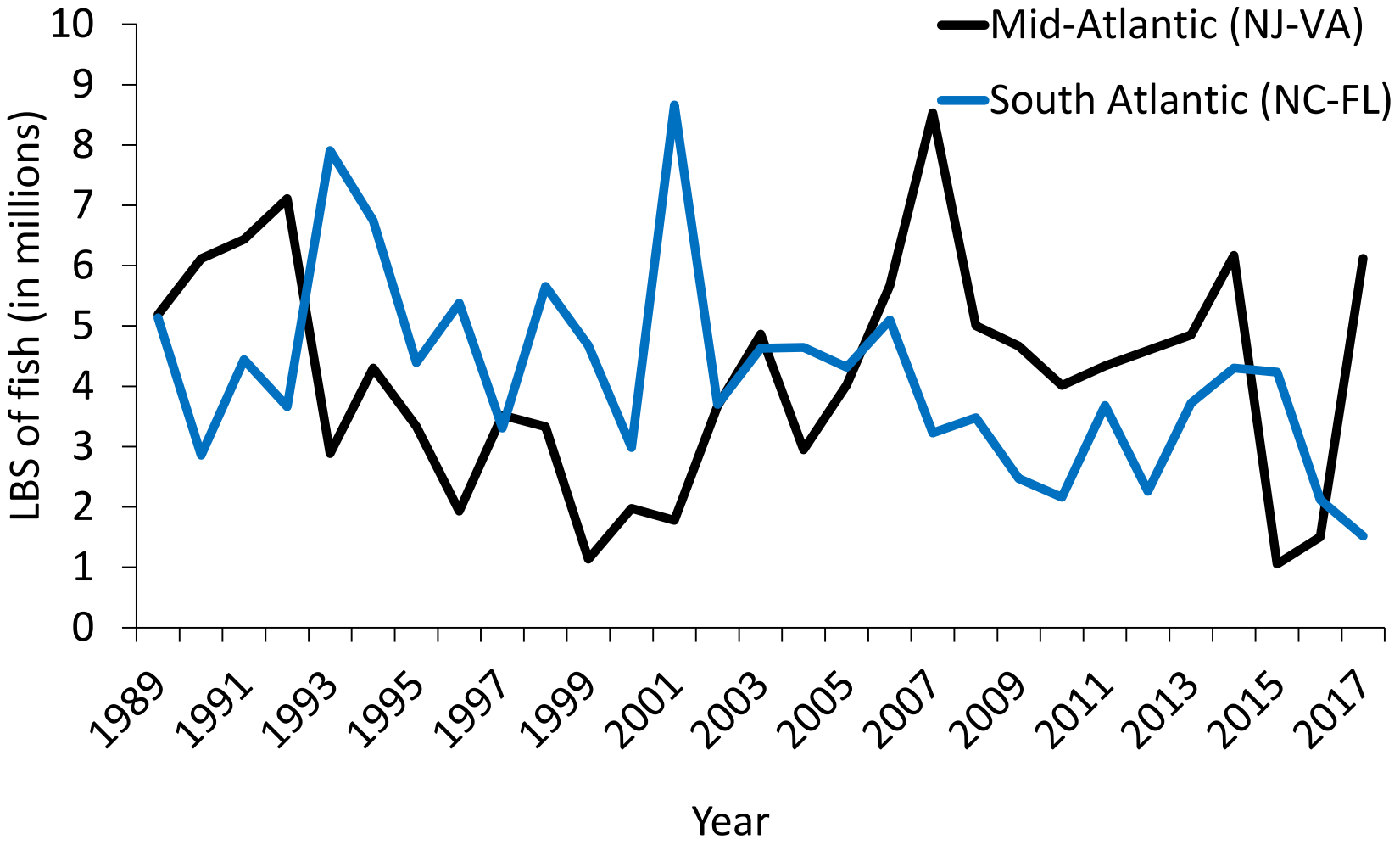
Spot: Commercial Landings

Annual commercial harvest by region for spot on the Atlantic coast of the United States.



Spot: Recreational Landings

Annual recreational harvest of spot by region for the Atlantic coast of the United States.



2017 Spot TLA Summary: Current Method

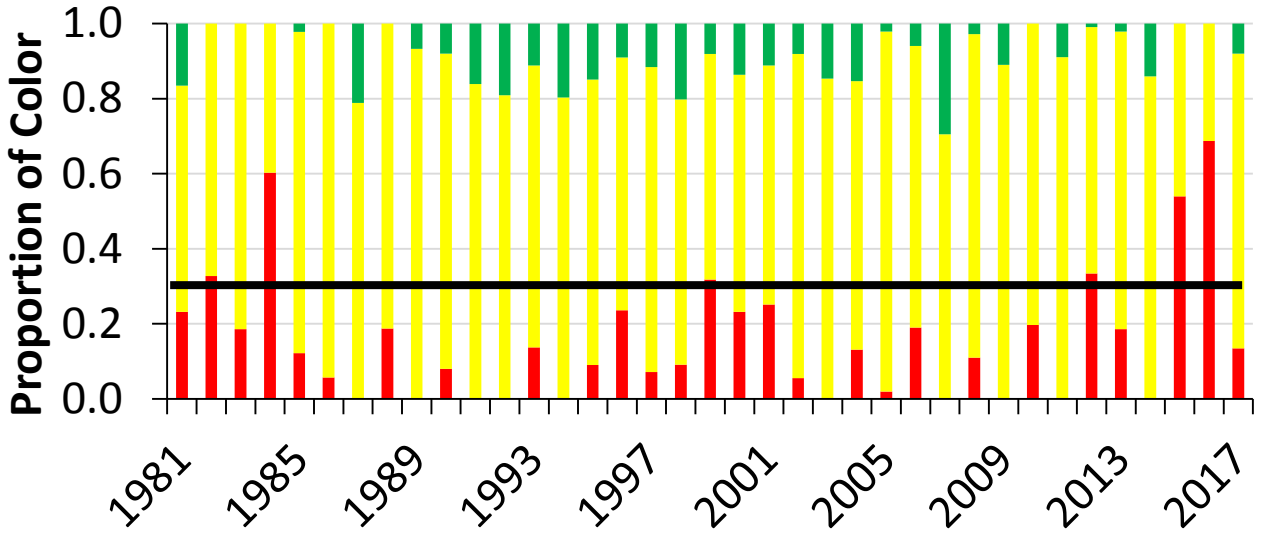
- Under the current TLA management scheme, management concern would not be triggered in 2017 since only one index (Harvest Composite TLA) was triggered at the 30% threshold.
- Neither the juvenile fish or shrimp fishery TLA triggered in 2017, but as an advisory indices; they did not impact the overall management triggers.

TLA : Improvement Recommendations

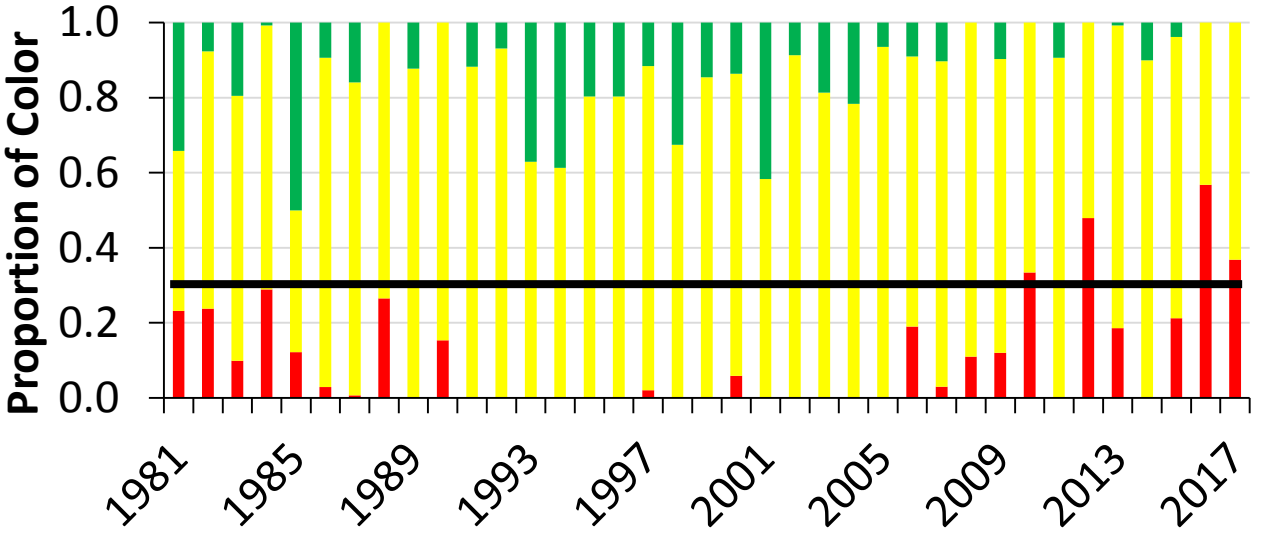
1. Incorporate indices from ChesMMAP and NC DMF Program 195, into the adult composite characteristic index, in addition to the currently used NEFSC and SEAMAP indices.
2. Revised adult abundance indices from the surveys mentioned above, in which age-length keys and length composition information are used to estimate the number of adult (age 1+) individuals caught by each survey.
3. Regional metrics characterizing the fisheries north and south of the Virginia-North Carolina state border. The ChesMMAP and NEFSC surveys would be used to characterize abundance north of the border, and the NCDMF Program 195 and SEAMAP surveys would be used to characterize abundance south of the border.
4. Change/establish the reference time period for all surveys to be 2002-2012.
5. Change the triggering mechanism to the following: Management action will be triggered according to the current 30% red and 60% red thresholds if both the abundance and harvest thresholds are exceeded in any 2 of the 3 terminal years.

2017 Regional TLA for Spot: Harvest Composite

- Mid-Atlantic composite TLA did trigger in 2017, since the two previous years were above the 30% threshold.

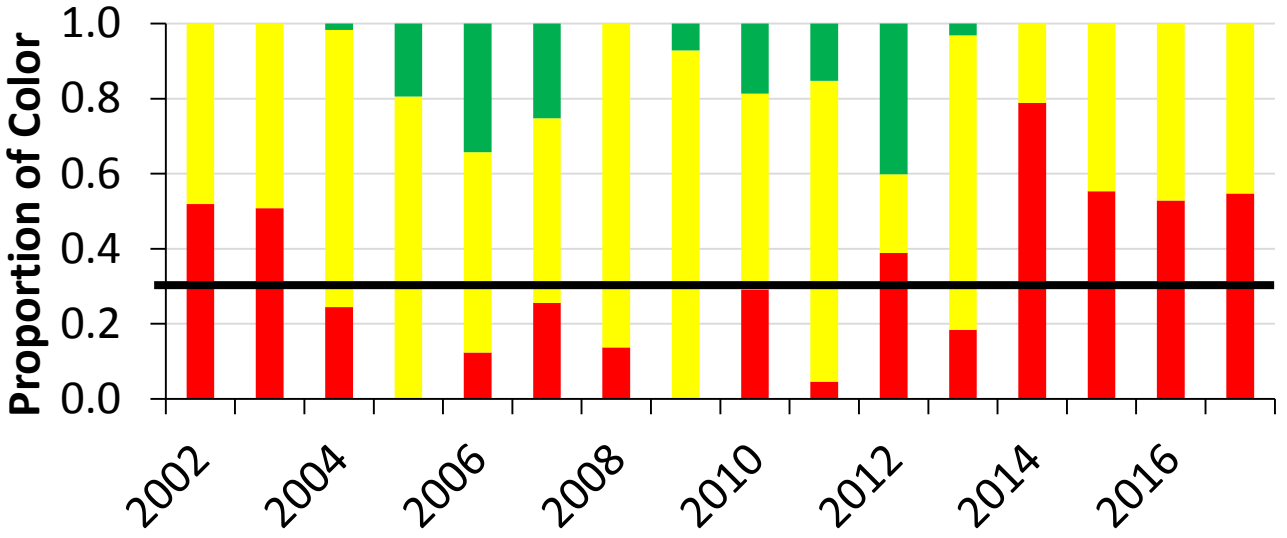


- South Atlantic composite TLA did trigger in 2017 with two of the last three years above 30%.

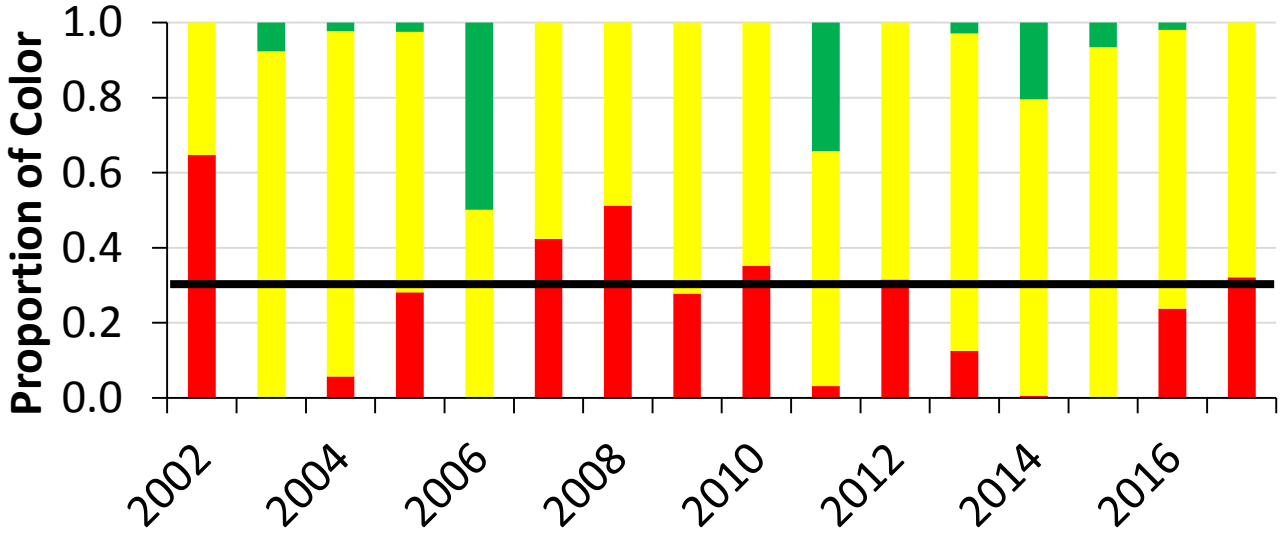


2017 Regional TLA for Spot: Adult Abundance Composite

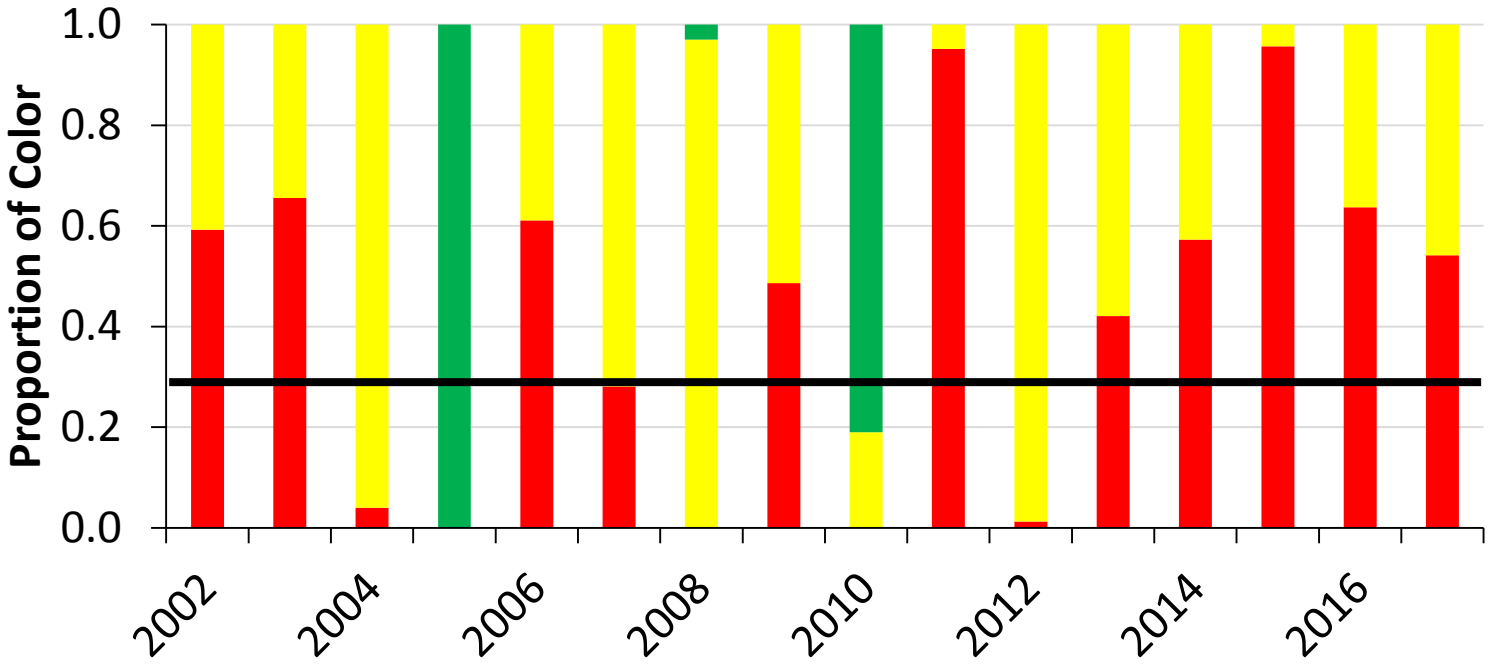
- Adult composite TLA for Mid-Atlantic did trigger in 2017, the 4th year in a row above the 30% threshold.



- Adult composite TLA for South Atlantic did not trigger in 2017 but did show a pattern of increased red proportions for the last two years.

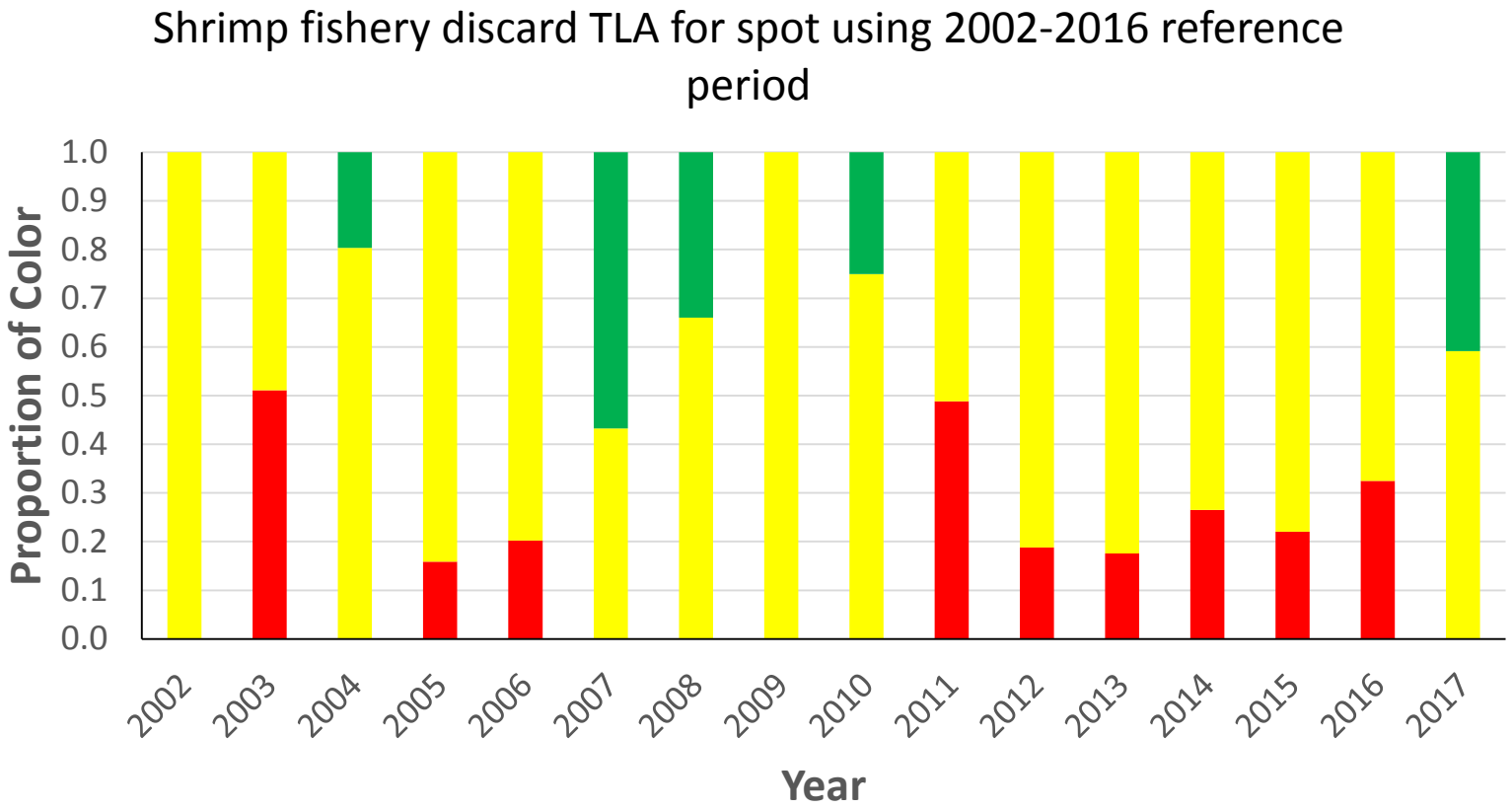


2017 Regional TLA for Spot: Juvenile Abundance Composite



- The Maryland juvenile fish survey was used as the single juvenile TLA index.
- The TLA index triggered in 2017 and was the 5 year in a row it would have under the 2 out of 3 terminal years above the 30% threshold rule.

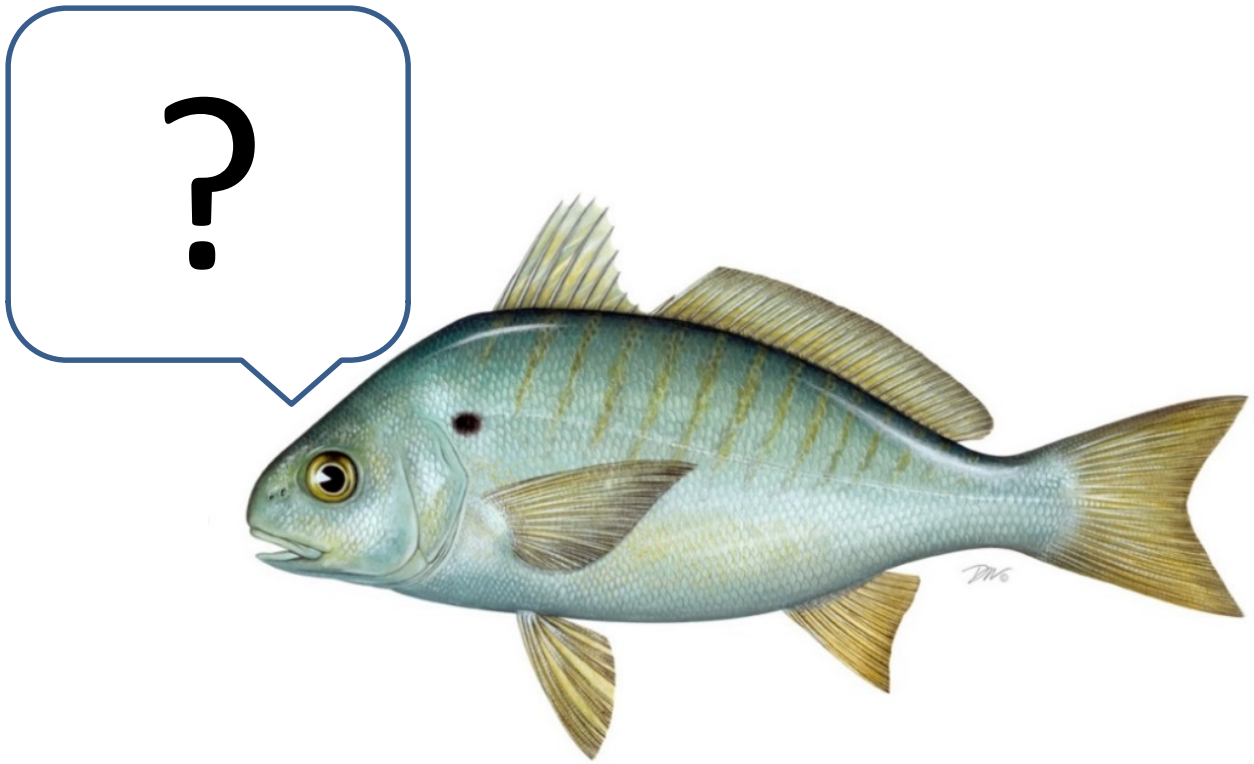
2017 shrimp fishery TLA using 2002-2016 reference period



- Shrimp trawl fishery discards did not reach a red concern threshold in 2017

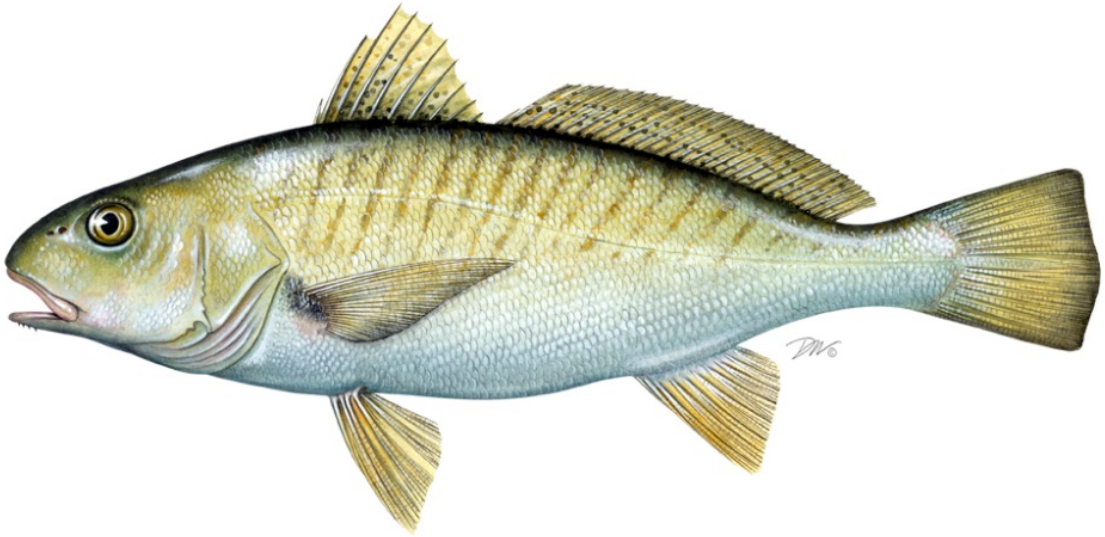
Regional Spot TLA: Summary

- The harvest composite for both regions triggered in 2017, which agreed with the triggering in 2017 for the coastwide combined harvest index in the original TLA.
- The adult composite TLA index triggered in the Mid-Atlantic but not in the South Atlantic.
- The juvenile TLA in the mid-Atlantic showed a similar pattern of decline seen in both the harvest and adult composite TLA's.
- Thus, a management response with moderate concern would be triggered by the Mid-Atlantic TLA, while no management response would be triggered by the South Atlantic TLA.



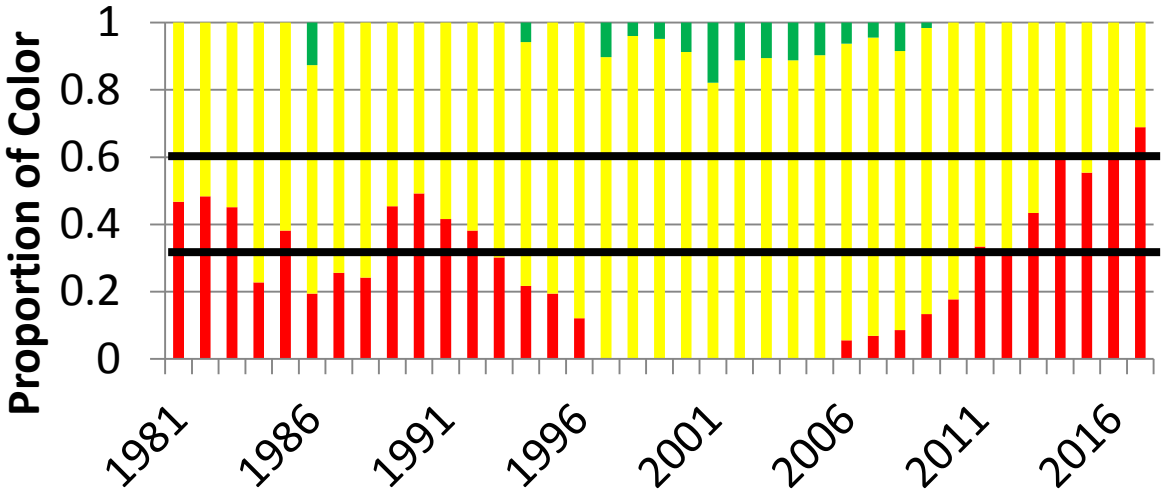
QUESTIONS

ATLANTIC CROAKER

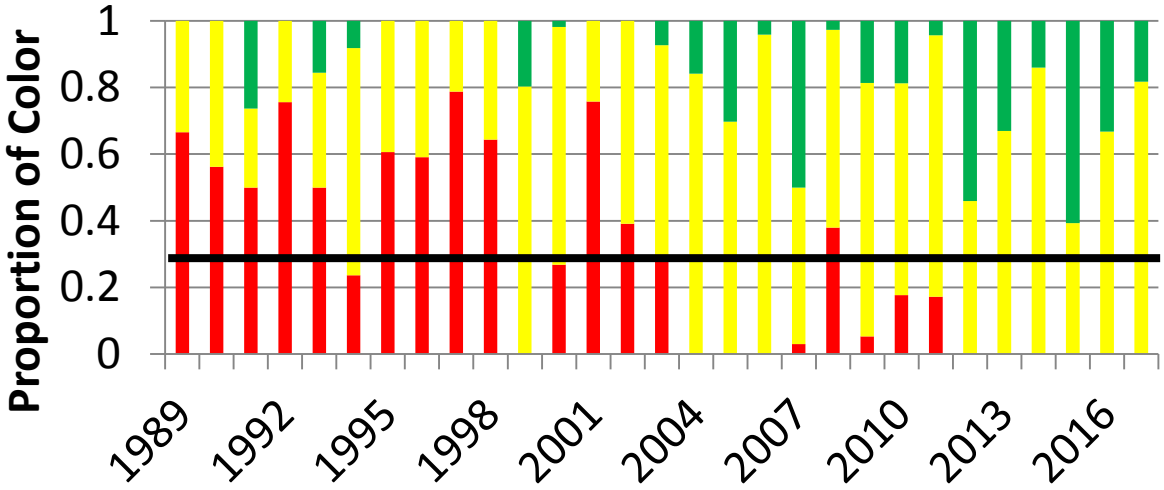


2017 TLA for Atlantic Croaker: Harvest and Adult Composite Indices

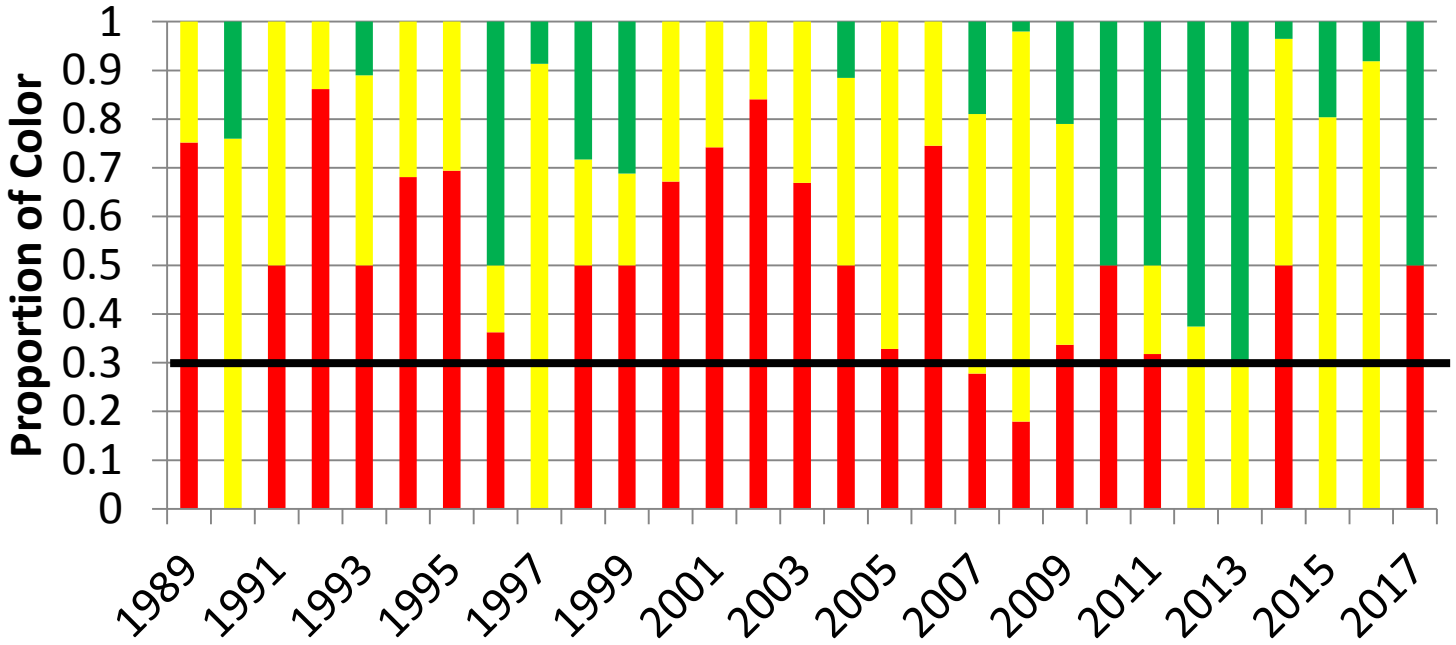
- Harvest composite characteristic triggered at the 30% threshold for the 5th year in a row. Red proportion in 2017 exceeded the 60% threshold.



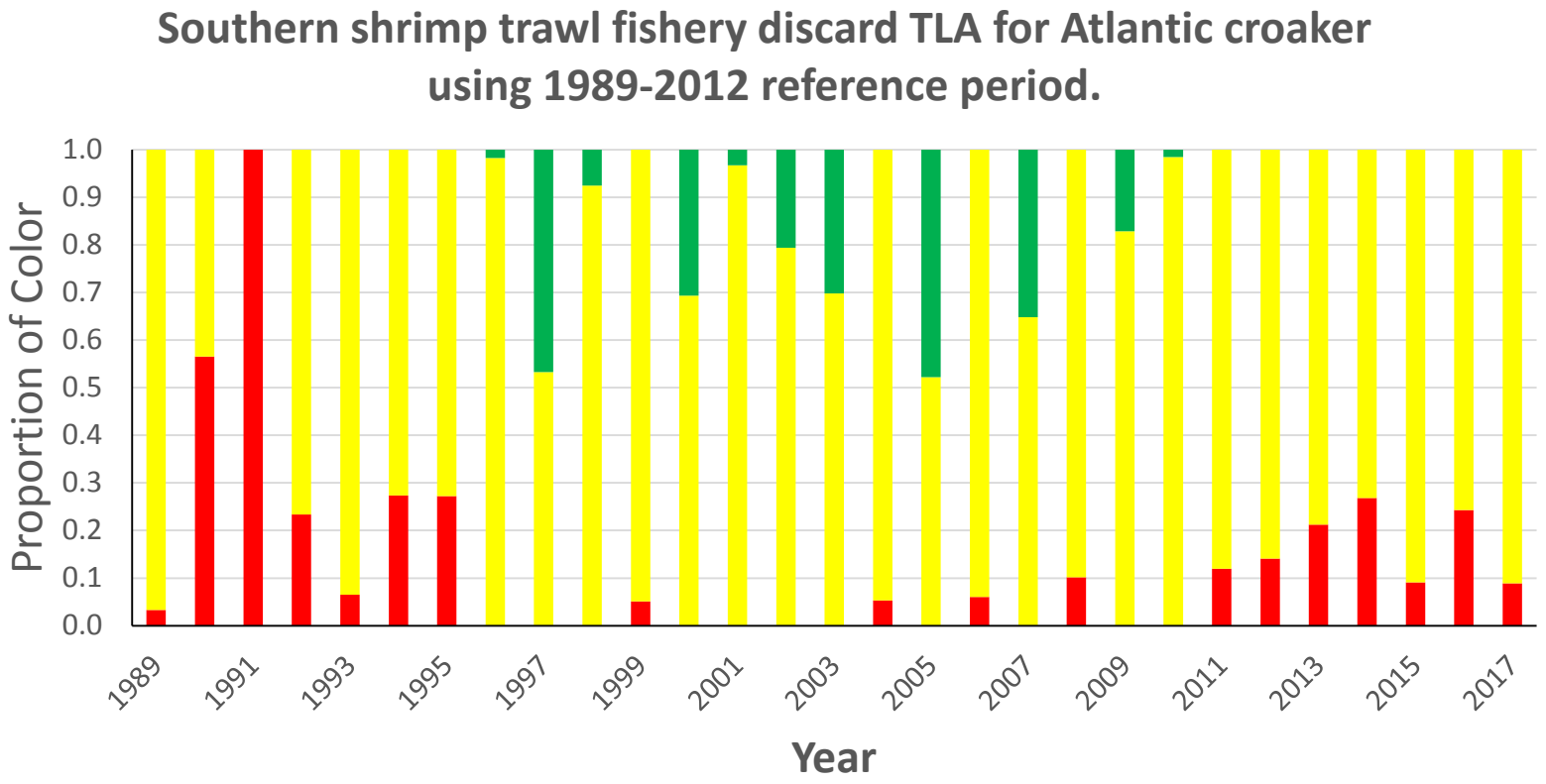
- Adult composite characteristic has had declining green proportions in recent years but is still above the long term mean. The adult composite characteristic did not trigger in 2017.



2017 TLA for Atlantic Croaker: Juvenile Composite Index

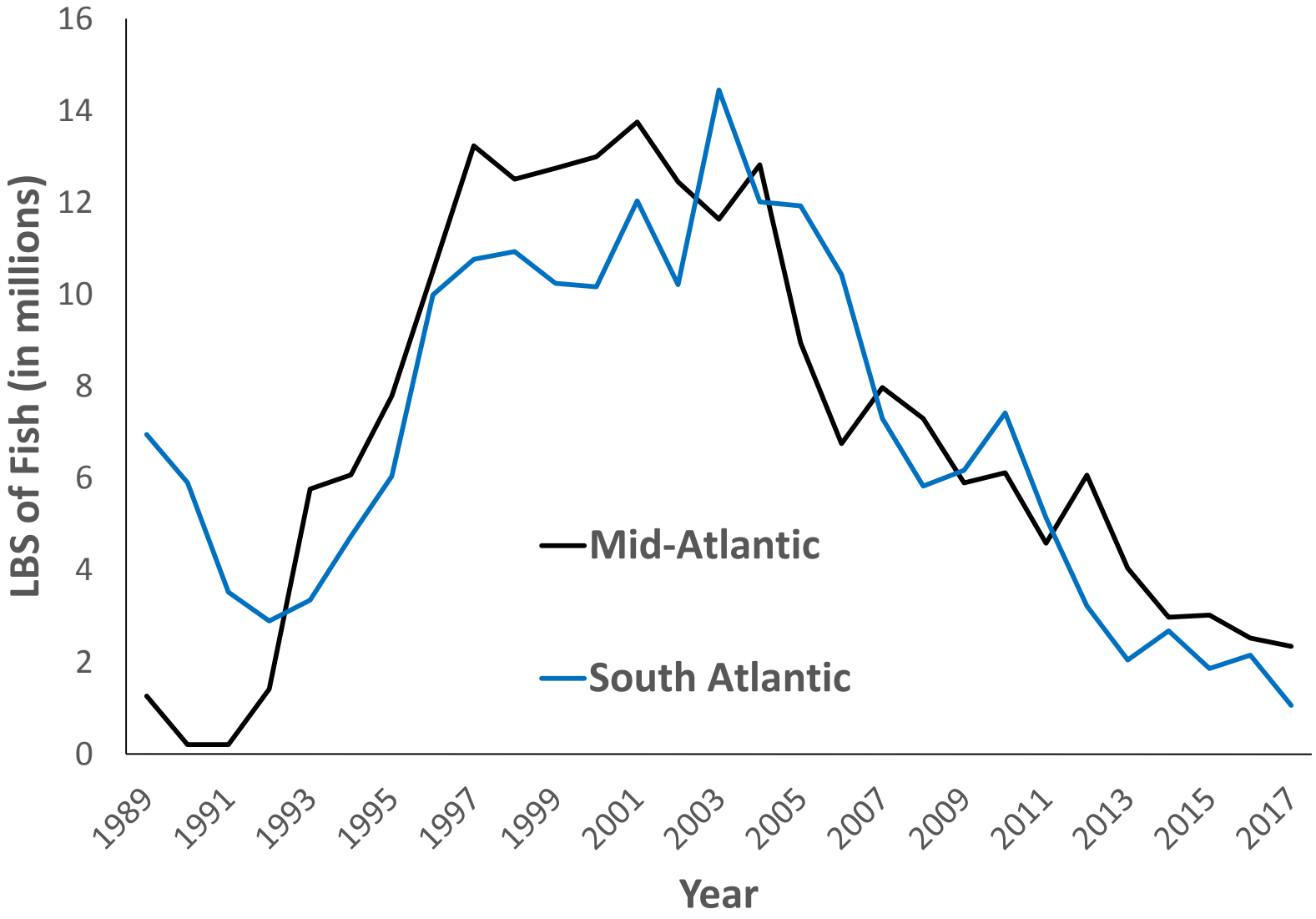


- The juvenile composite characteristic did not trigger in 2017.

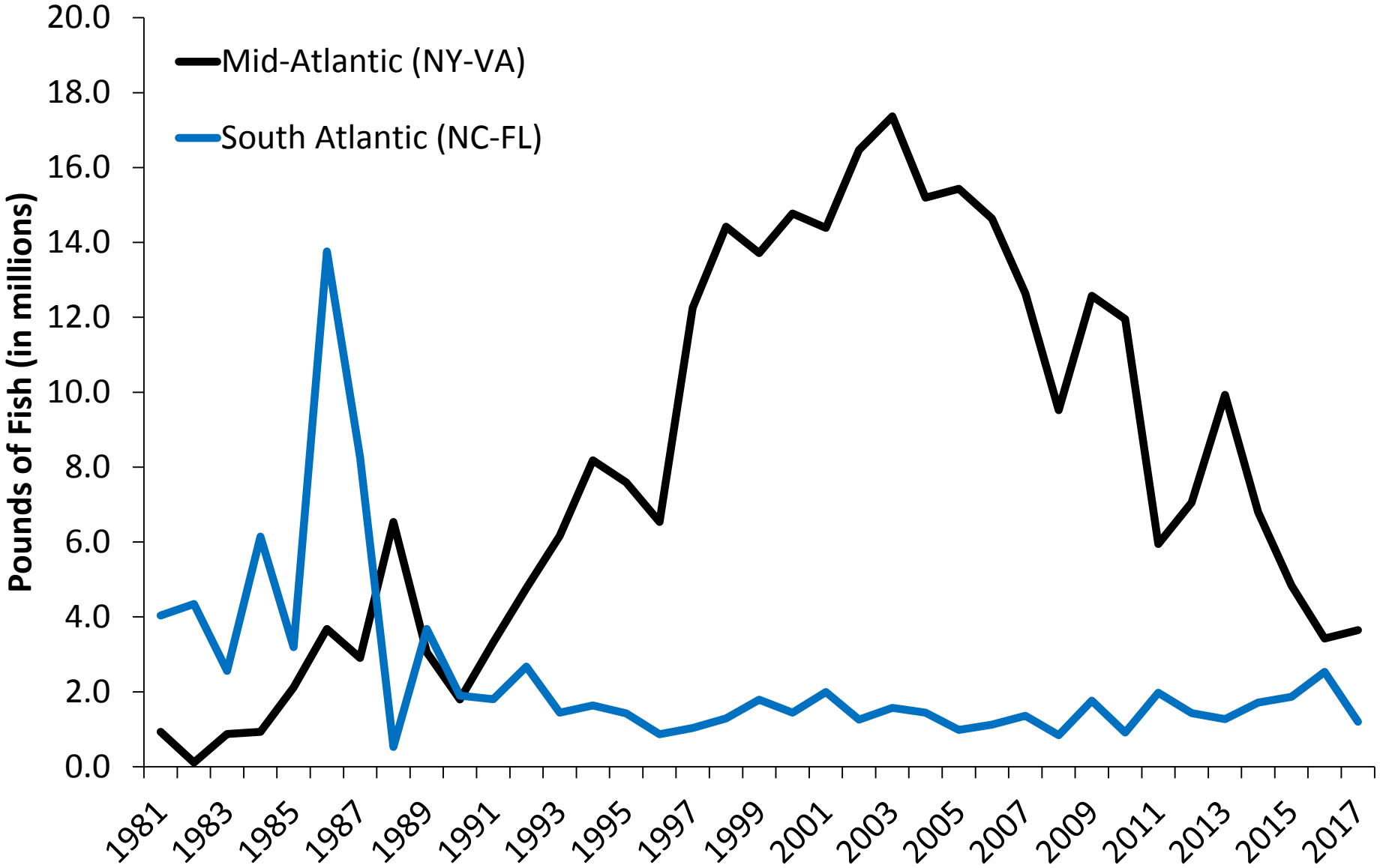


- The southern shrimp trawl fishery TLA did not trigger at the 30% threshold in 2017

Commercial Landings



Recreational Landings



2017 Atlantic Croaker TLA Summary: Current Method

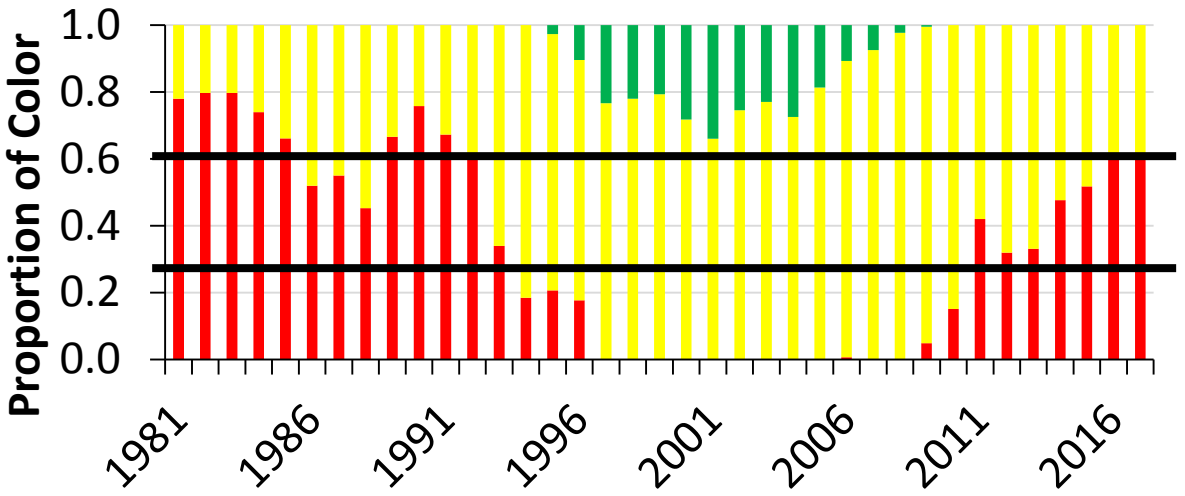
- Under the current TLA management scheme, management concern would not be triggered in 2017 since only one index (Harvest Composite TLA) was triggered at the 30% threshold.
- Neither the juvenile composite or shrimp TLA did not trip in 2017, but it has shown a pattern of high variability coastwide which could indicate recruitment issues for juvenile croaker.

TLA : Improvement Recommendations

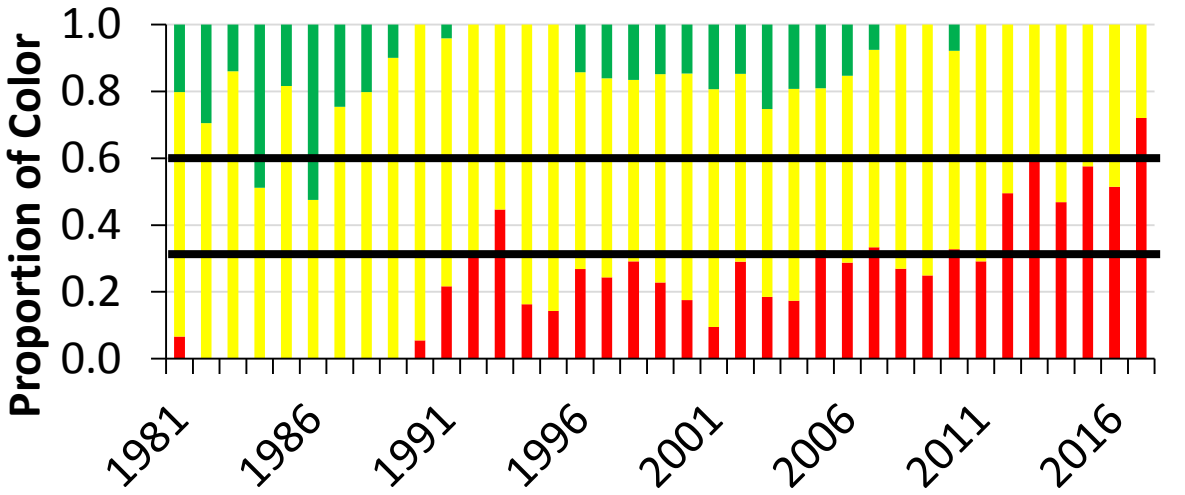
1. Incorporate indices from ChesMMAP and SC DNR Trammel Net Survey, into the adult composite characteristic index, in addition to the currently used NEFSC and SEAMAP indices.
2. Revised adult abundance indices from the surveys mentioned above, in which age-length keys and length composition information are used to estimate the number of adult (age 1+) individuals caught by each survey.
3. Regional metrics characterizing the fisheries north and south of the Virginia-North Carolina state border. The ChesMMAP and NEFSC surveys would be used to characterize abundance north of the border, and the SC DNR Trammel Net and SEAMAP surveys would be used to characterize abundance south of the border.
4. Change/establish the reference time period for all surveys to be 2002-2012.
5. Change the triggering mechanism to the following: Management action will be triggered according to the current 30% red and 60% red thresholds if both the abundance and harvest thresholds are exceeded in any 3 of the 4 terminal years.

2017 Regional TLA for Atlantic Croaker: Harvest Composite

- Mid-Atlantic harvest composite TLA triggered in 2017 for the 7th year in a row at the 30% threshold and for the 2nd consecutive year at the 60% threshold.

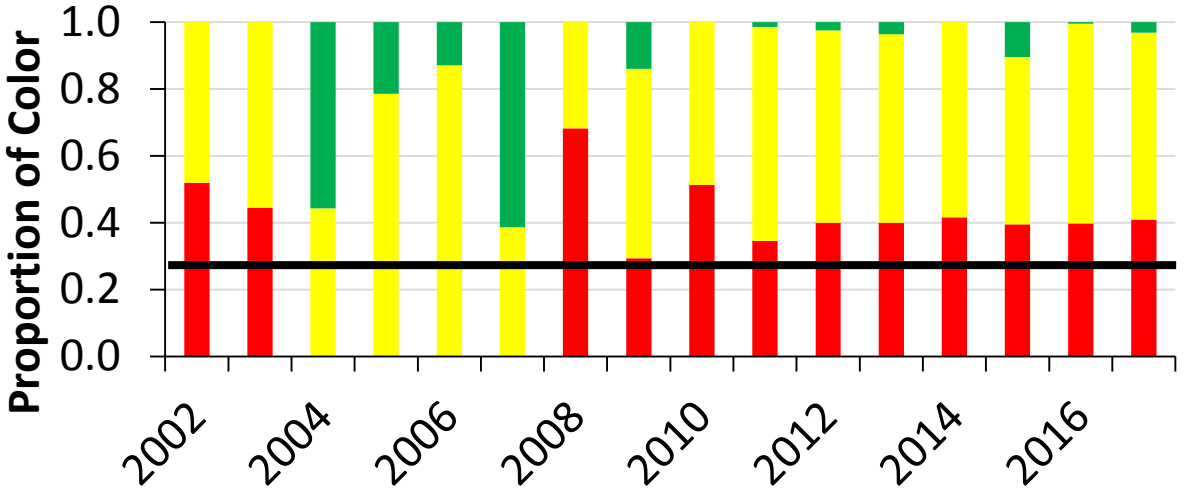


- The South Atlantic harvest composite TLA showed a declining trend, triggering at the 30% level for the 6th consecutive year.

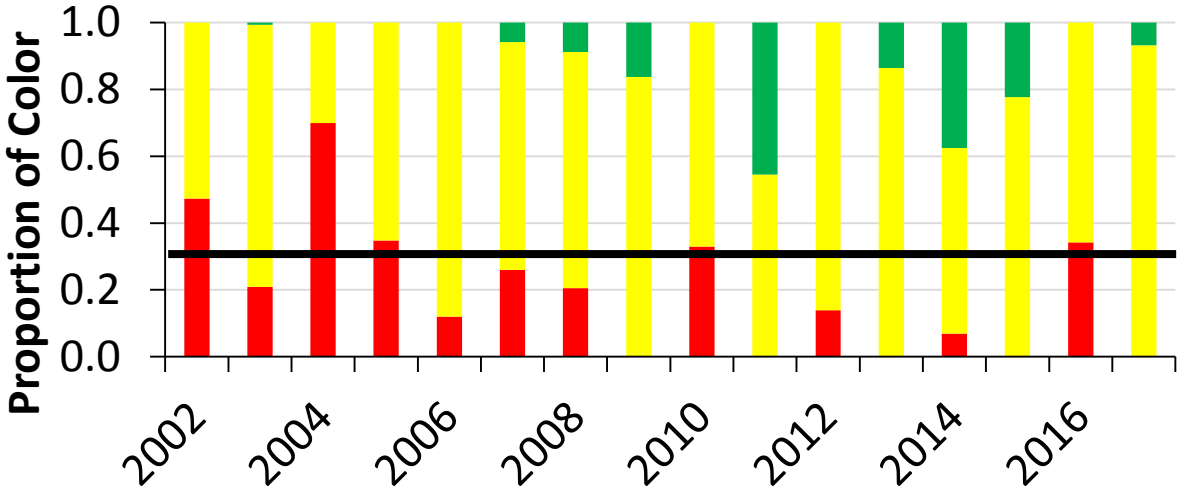


2017 Regional TLA for Atlantic Croaker: Adult Composite

- The Mid-Atlantic adult composite triggered in 2017 for the 8th year in a row.

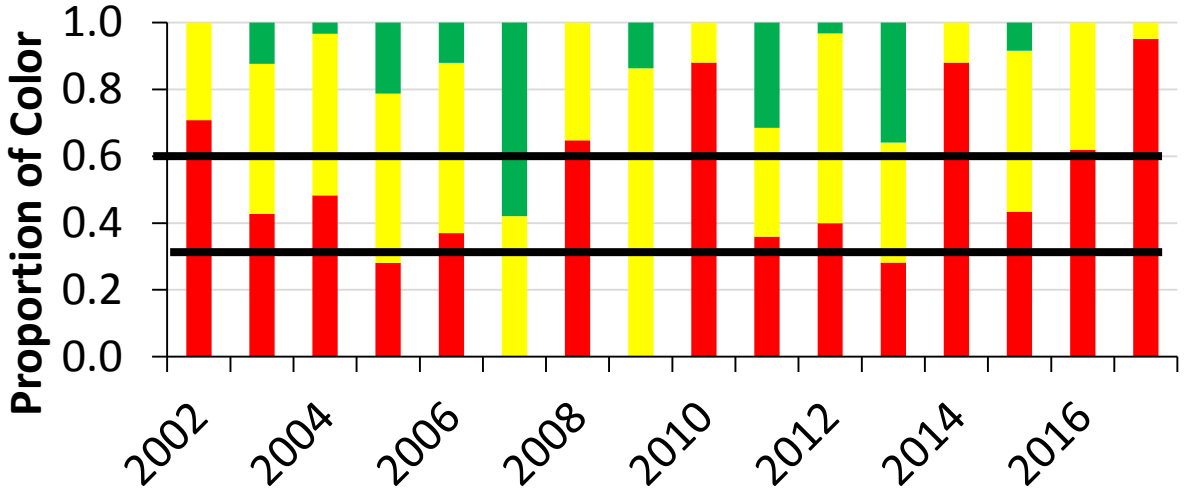


- The South Atlantic adult composite did not trigger in 2017.

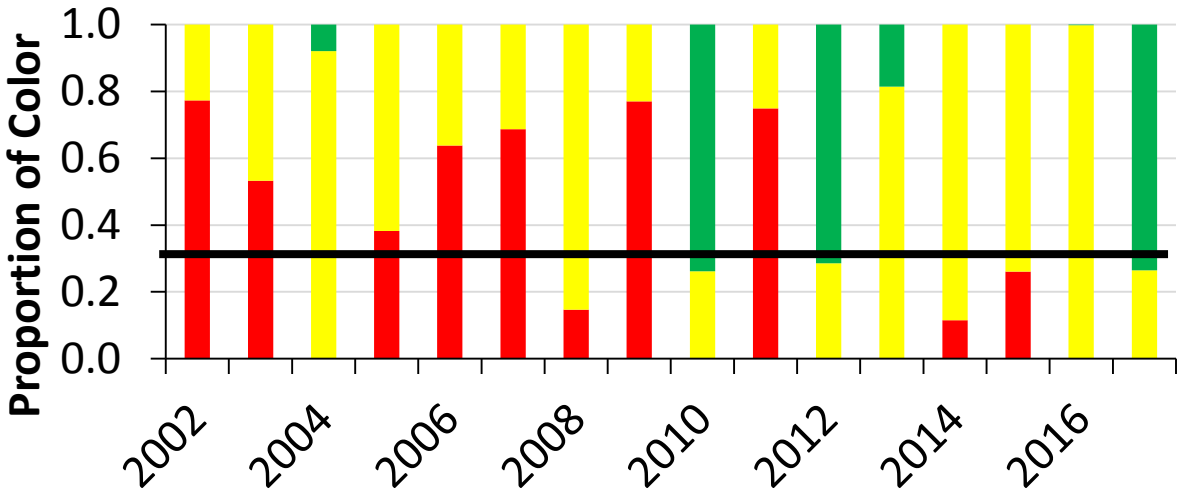


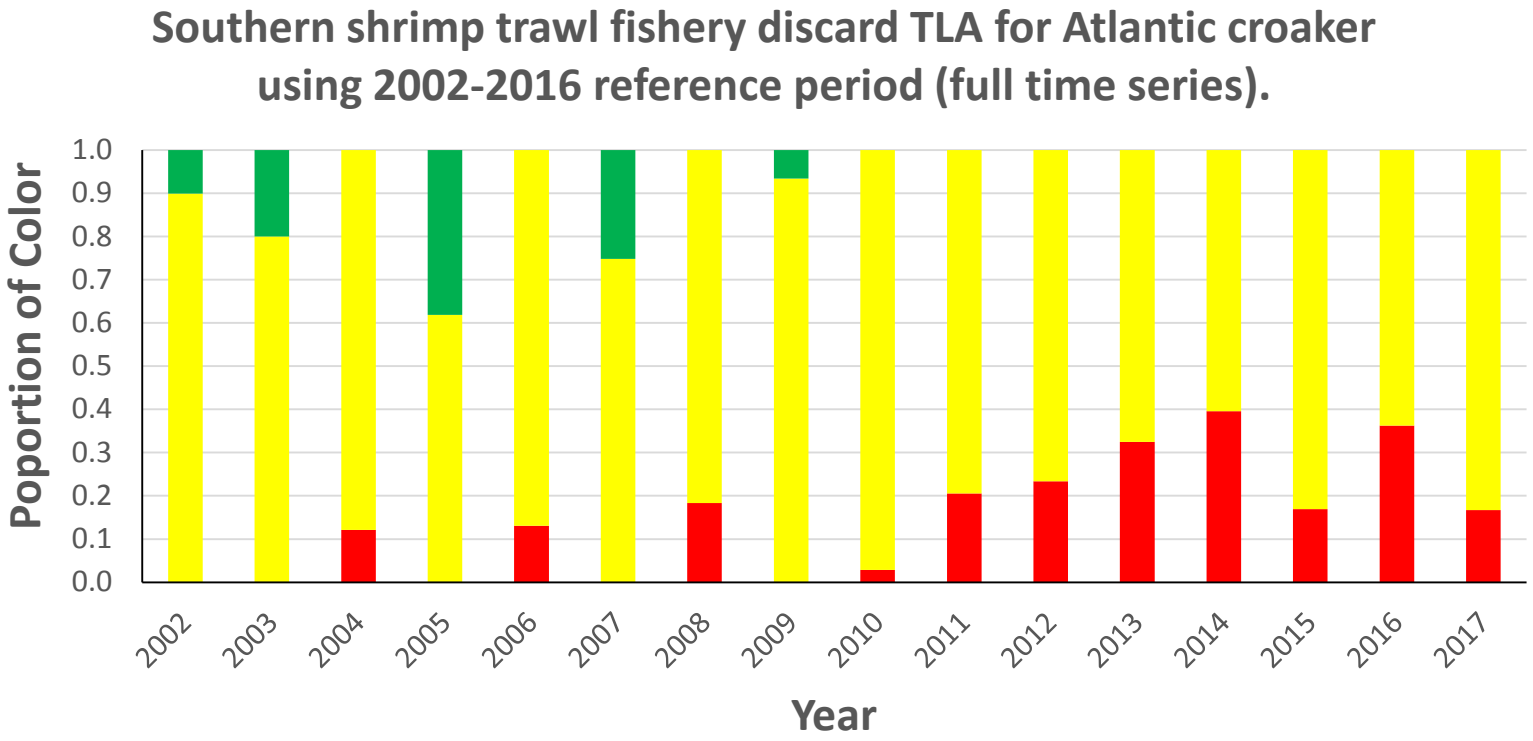
2017 Regional TLA for Atlantic Croaker: Juvenile Composite

- The Mid-Atlantic juvenile composite TLA triggered in 2017 at the 60% threshold, with 3 of the 4 terminal years above 60% red.



- The south Atlantic juvenile index did not trigger in 2017.





- The shrimp trawl fishery TLA did not exceed the 30% red threshold in 2017

Regional Croaker TLA Summary

- The harvest composite TLA triggered for both regions which agreed with the coastwide TLA.
- Both the adult and juvenile abundance composite characteristics triggered in the mid-Atlantic but not in the south Atlantic.
- Thus, a management response with moderate concern would be triggered in by the Mid-Atlantic TLA, while no management response would be triggered by the South Atlantic TLA.

QUESTIONS ?

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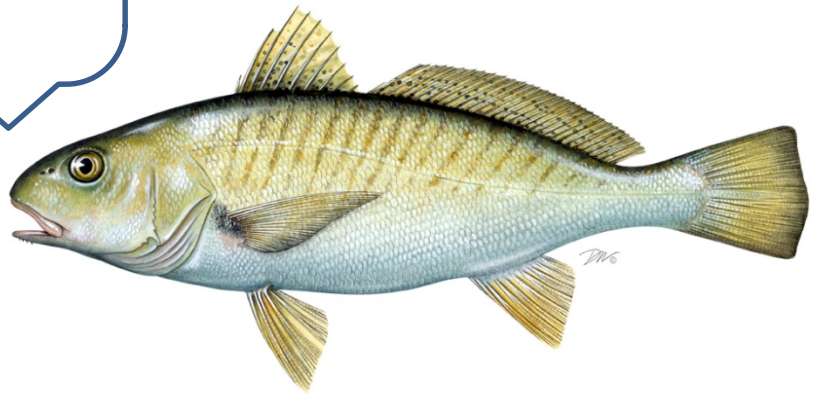
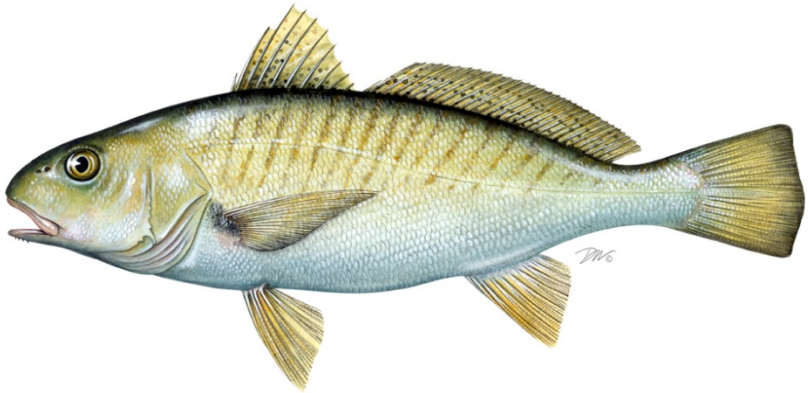
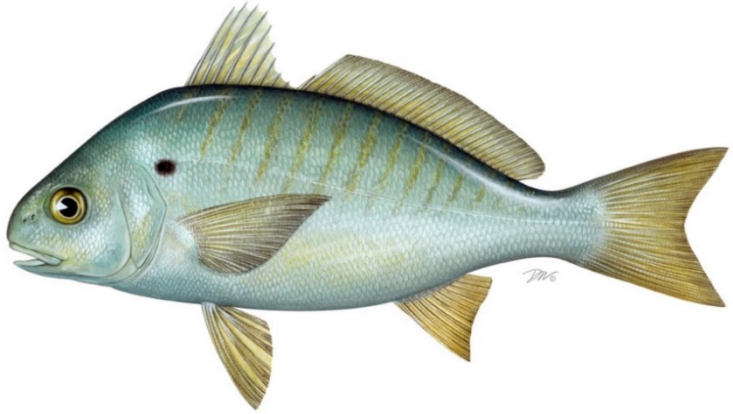


Potential Updates to the Traffic Light Analyses for Atlantic Croaker and Spot





August 2018

Postponed Motion

- May 2018 Meeting
- *"Move to initiate an addendum to the spot and croaker fishery management plans that incorporates the new traffic light analyses and management response to those analyses."*

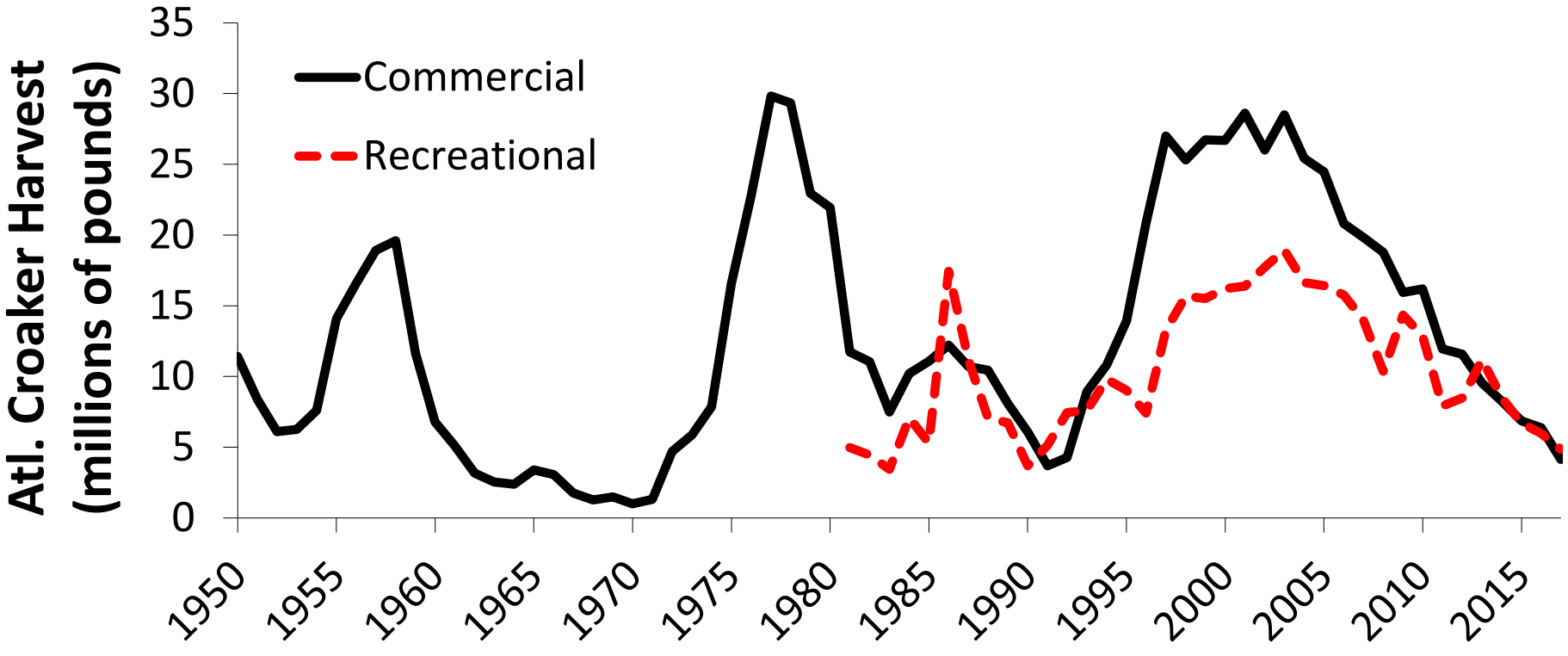
  Motion by C. Batsavage, seconded by M. Gary
- PDT populated & tasked with investigating potential management responses to TC-recommended TLA update that would achieve a percent red of 35% or less

PDT Report

- PDT interpreted Board direction that >35% red goal was applicable to abundance index
- PDT unable to recommend specific harvest reduction that would reasonably predict achieving the goal
  - Poorly-defined (if any) stock-recruit relationship
  - Lack of relationship between harvest and abundance (motivated this tasking)
  - For croaker, strong environmental impacts; may impact spot as well

PDT Recommendations

- PDT recommends, instead of goal proportion red, establish long-term, coastwide management measures that would control harvest and can be altered in response to updated TLA triggers



PDT Recommendations

- Viable reg. options: seasons (use movement data to determine timing), trip limits (vessel, bag, &/or possession), size limits (croaker only)
  - Bag, size, possession limits & seasons applied at state level for croaker; creel & aggregate bag limits for spot
- Coastwide management response to regional triggers
  - Single stock; regions are artifacts of survey sampling, NOT distinct populations
  - Overlap of fisheries among states
  - Regionally apportioned TLA response
    - E.g. If long-term management measure is 100 lb trip limit and Mid-Atlantic TLA triggers, response could be 80 lb trip limit in Mid and 90 lb trip limit in South

Potential Timing of an Addendum

Step	Fast-Track Date	Slow-Track Date
Initiate Addendum	**Today**	**Today**
Draft Addendum Development • State Public Hearings	Aug-Oct 2018 • NA	Aug 2018-Feb 2019 • Aug-Oct 2018
Board Review for Public Comment	Oct 2018	Feb 2019
Public Comment & Commission Public Hearings	Oct 2018-Feb 2019	Feb 2019-May 2019
Public Comment Review & Final Board Action	Feb 2019	May 2019

TC-Recommended Changes to TLA

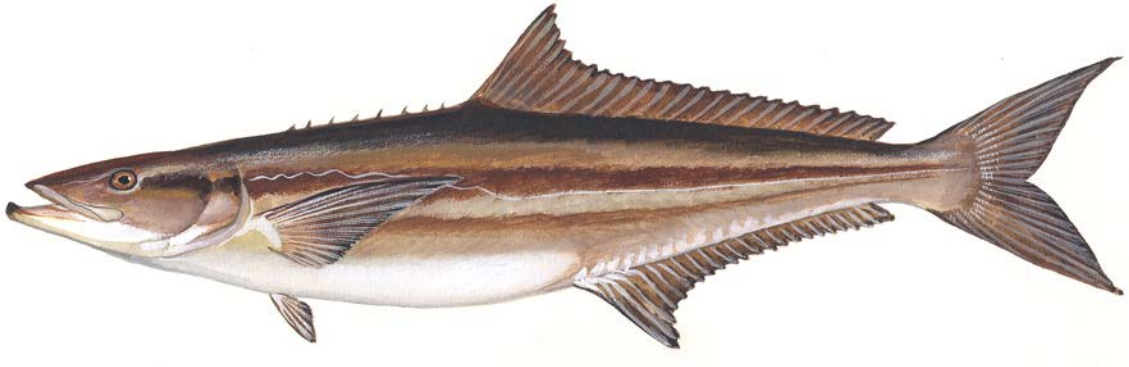
	Current TLA	New TLA
Adult Abundance Indices	NEFSC, SEAMAP	**Mid-Atlantic:** NEFSC, **ChesMMAP S Atlantic:** SEAMAP, **SCDNR Trammel (croaker)/ NC Program 195 (spot)**
Adult Index Ages	Not age-specific	**Croaker: 2+; Spot: 1+**
Ref. Time Period	Croaker: 1996-2008 Spot: 1989-2012	**Croaker: 2002-2012** **Spot: 2002-2012**
Triggering Mechanism	Both adult abundance & harvest metrics >30% (mod. concern) or >60% (sig. concern) in terminal 3 years (croaker) or terminal 2 years (spot)	Both adult abundance & harvest metrics >30% (mod. concern) or >60% (sig. concern) in **3 of 4 terminal years (croaker)** or **2 of 3 terminal years (spot)**
2018 TLA Result	Croaker: No Trigger Spot: No Trigger	**Croaker: Mid-Atl Trigger (30%)** **Spot: Mid-Atl Trigger (30%)**

Postponed Motion

- May 2018 Meeting
- *"Move to initiate an addendum to the spot and croaker fishery management plans that incorporates the new traffic light analyses and management response to those analyses."*

  Motion by C. Batsavage, seconded by M. Gary

South Atlantic State/Federal Fisheries Management Board



August 2018

Updated SEDAR 58 Schedule

- SEDAR 58 schedule revised to incorporate updated MRIP estimates

Step	Date
Data Evaluation Workshop – Charleston, SC	Jan. 14 – 18, 2019
Assessment Workshop – via webinars	April – July, 2019
Review Workshop – Atlantic Beach, NC	Sept. 10-12, 2019
Completed Report submitted to Commission/Councils/SERO/SEFSC	October 16, 2019
Presentation to Board and potential Board response	February, 2020

Technical Committee Report

- Feb. 2018 – TC tasked with evaluating recreational management using pounds and numbers of fish, and providing a recommendation on alternative techniques for determining harvest impacts
- 3 conference calls:
  1. Need more information on MRIP estimation to evaluate
  2. Call with MRIP staff – Answered specific questions on estimation as pertaining to cobia
  3. Review of MRIP information and conclusions/recommendations

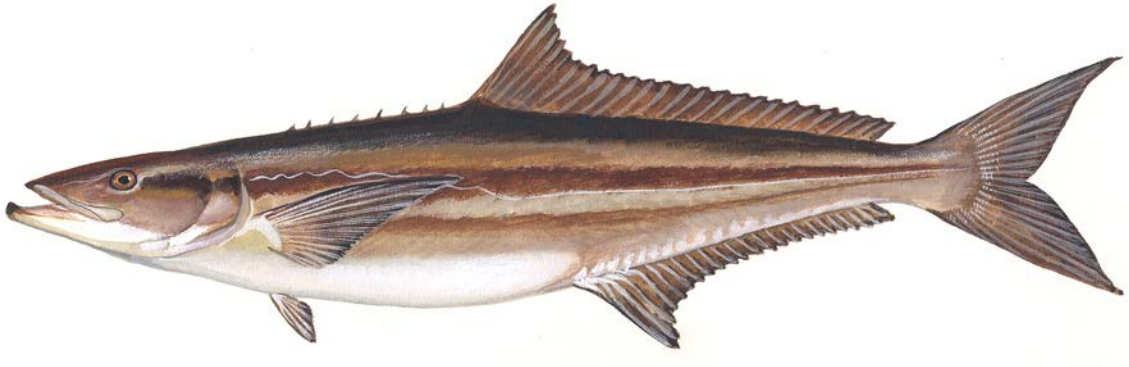
Technical Committee Report

- TC Recommendation: If practically feasible, manage based on numbers
  - Removes error associated with MRIP or SEFSC expansion based on avg. weights, esp. those weights based on few or grouped samples
- No violation of MRIP survey design in 2015 or 2016, thus no justification for altering estimates via smoothing or outlier techniques
  - If highs are removed, must also consider removing the lows of 2011 or 2012
  - MRIP best-suited for evaluating landings TRENDS; accounted for with current 3-year evaluation

Technical Committee Report

- TC Recommendation: Consider use of alternative metrics of stock monitoring such as those that could be evaluated from age or length data
  - E.g. Evaluating trends in age distribution over time
  - Would require states that don't have such data to begin collection
  - Information not intended to replace MRIP catch estimates, but to provide context to management actions
  - Incorporated as topic in Draft Amendment 1 PID by the PDT

Draft Public Information Document for Draft Amendment 1 to the Atlantic Cobia Fishery Management Plan



August 2018

Amendment Process

1. Public Information Document (PID)

   -Broad scoping document

   -Provides public opportunity to identify major issues and mgmt. alternatives

2. Draft Amendment

   -More focused document which details the suite of management options for each issue

   -Provides public opportunity to comment on specific management options

Timeline

Step	Anticipated Date
Approval of Draft PID by the Board ***Current step***	Aug. 9
Public review and comment on PID	Written: Aug. 10 – Oct. 4 Hearings: Sep. 10 – Sep. 20
Board review of public comment & direction on what to include in Draft Amendment 1	Oct 2018
Review and approval of Draft Amendment 1 by Board for public comment	May 2019
Public review and comment on Draft Amendment 1	May – Aug 2019
Board review of public comment, review and approval of the final Amendment 1 by the Board, Policy Board and Commission	Aug 2019

Issues Currently in PID

- Recommended Management for Federal Waters
- Harvest Specification Process
- Biological Monitoring

Recom. Management for Fed. Waters

- Need to replace language connecting ISFMP to CMP FMP
  - e.g. RHL "set equivalent to 99% of and monitored concurrently with the recreational allocation of the federal ACL"
- ACFCMA allows Commission to recommend measures for promulgation in fed. waters by NOAA Fisheries
- Need to address BOTH commercial & recreational measures
- Measures currently in place:
  - Rec: Coastwide min. size, vessel, & bag limits, state-specific vessel limits and seasons, RHL
  - Com: Coastwide min. size, vessel, & possession limits, ACL
- How should measures be implemented in fed. waters?

Harvest Specification Process

- SEDAR 58 and Board desire to consider alternative management strategies
- Allow for a range of management measures that would be periodically specified
- Commercial AND Recreational
- What measures should be able to be considered?
  - Several options listed in PID
- How often are measures set?
- Annual Harvest Limit?
- Pounds or Numbers?
- Commercial permitting?

Biological Monitoring

- Board consideration and use of data other than commercial and MRIP catch estimates to evaluate stock health and inform management decisions
  - Ex. Use of VA avg. weights to evaluate implementation of FMP
- Types of data: Age, length, sex, weight
- Should the FMP require biological sampling? For which fishery(ies)?
- Sampling requirements?
- How to sample? Freezer? Weigh-in stations? Commercial purchase?

General Questions for Board

- Are there other issues you would like to see in the PID?
- Are there current/new options you would like to see specified for a particular issue?