



# Technical Committee Review of Cobia FMP Implementation Plans

Presented to ASMFC South Atlantic  
State/Federal Fisheries Management Board

February 7, 2018

Steve Poland, TC Chair

# Overview



## FMP requirements

- Commercial and Recreational measures
- Recreational Harvest Limits

## Technical Committee guidelines

- Standardized analysis
- MRIP uncertainty

## Implementation Plan Reviews

- *De minimis*
- VA - GA



# FMP Requirements

Complementary plan with Framework  
Amendment 4 to the Coastal Migratory Pelagics  
FMP

## Recreational

- 620,000 lb ACL
- 36” Fork Length  
Minimum Size
- 1 fish/person
- Up to 6 fish/vessel

## Commercial

- 50,000 lb ACL
- 33” Fork Length  
Minimum Size
- 2 fish/person
- Up to 6 fish/vessel



# FMP Requirements

## *De minimis* status

- State must show landings less than 1% of the coastwide recreational landings for 2 of 3 years from 2014-2016

## Management Options

- *De minimis* state may match the regulations of an adjacent (or the nearest) non-*de minimis* state

*OR*

- 1 fish/person and minimum size limit of 29-inches Fork Length or 32-inches Total Length



# FMP Requirements

## Non-*De minimis* states management options

- States must implement size and bag limits consistent with Framework Amendment 4
  - 36-inches Fork Length or 40-inches Total Length
  - 1 fish/person
- A vessel limit no greater than 6/vessel
- A season that will achieve a harvest that is below a state's recreational harvest target



# FMP Requirements

## Recreational Seasons and Harvest Targets

– States may define their own seasons

State	GA	SC	NC	VA
Harvest Target (pounds)	58,311	74,885	236,313	244,292

States must demonstrate that their proposed season and vessel limit options constrain recreational harvest to their target



# Technical Committee Guidelines

## Standard analysis for all states

- Timeframe: 2011-2015
- Average weights: SEFSC
  - VA: state derived average weights

## MRIP uncertainty

- Investigated different estimate weighting approaches
- 3-yr avg. monitoring period accounts for uncertainty



# Implementation Plan Review

## New Jersey

- Meets *de minimis* status
- Proposed management: Match Virginia
- TC Recommendation: **Approve**

## Delaware

- Meets *de minimis* status
- Proposed management:
  1. no season; 29-inch FL; 1 fish
  2. Match Virginia
- TC Recommendation:
  1. **Approve**
  2. **Approve**





# Implementation Plan Review

## Maryland

- Meets *de minimis* status
- Proposed management: Match Virginia
- TC Recommendation: **Approve**

## Potomac River Fisheries Commission

- No landings to justify *De minimis* status
- Proposed management:
  1. no season; 29-inch FL; 1 fish
  2. Match Virginia
- TC Recommendation:
  1. **Approve**
  2. **Approve**



## Implementation Plan Review - VA

Presented 7 options for consideration by the TC using South East Fisheries Science Center (SEFSC) avg. weights and VMRC Marine Sportfish Collection Project avg. weights

- SEFSC avg. weights for Virginia were 34.04 lbs. for all 5 years of the reference period
- VMRC avg. weights calculated from fishery dependent sources for all 5 years

VMRC is asking the SERO/SEFSC to consider their avg. weights in the future



# Implementation Plan Review - VA

Adapted from Table 1 in VA Implementation Plan

Option	Open Season	Vessel Limit	Predicted landings (lbs; SEFSC avg. wt)	Predicted landings (lbs; VMRC avg. wt)
1	May 15-Sept. 15	3	270,058	225,445
2	May 15-Aug. 31	3	268,238	223,470
3	June 1-Sept. 30	3	238,908	200,368
4	June 1-Sept. 15	3	237,088	198,393
5	May 15-Aug. 31	4	268,238	223,470
6	June 1-Sept. 30	4	239,622	201,142
7	June 1-Sept. 15	4	237,445	198,780

**VA Recreational Harvest Target: 244,292 lbs**



# Implementation Plan Review - VA

TC recommendation:

Proposed Recreational Season/Vessel Limit: Seven options proposed

1. Season: May 15-Sept. 15; Vessel Limit: 3 fish – **Approve, conditional**
2. Season: May 15-Aug. 31; Vessel Limit: 3 fish – **Approve, conditional**
3. Season: June 1-Sept. 30; Vessel Limit: 3 fish – **Approve**
4. Season: June 1-Sept. 15; Vessel Limit: 3 fish – **Approve**
5. Season: May 15-Aug. 31; Vessel Limit: 4 fish – **Approve, conditional**
6. Season: June 1-Sept. 30; Vessel Limit: 4 fish – **Approve**
7. Season: June 1-Sept. 15; Vessel Limit: 4 fish – **Approve**



# Implementation Plan Review - NC

Presented 2 options for consideration:

1. No season; For Hire: 4 fish/vessel and Private: 2 fish/vessel
2. No season; For Hire: 3 fish/vessel and Private: 2 fish/vessel



# Implementation Plan Review - NC

Predicted landings from Option 1 exceeded the harvest target by 20,244 lbs.

- Acknowledge projected harvest exceeded the RHL, but cited the under harvest from 2017 based on NC projections

Option 2 predicted landings 34,205 lbs. below the harvest target

TC Recommendation:

- Option 1: **Do not approve**
- Option 2: **Approve**



# Implementation Plan Review - SC

## Management measures

- Match Federal regulations; maintain 3 fish/vessel from June 1 – April 30 within Southern Cobia Management Zone

TC Recommendation: **Approve**



# Implementation Plan Review - GA

## Management Measures

- March 1 – October 31; 6 fish/vessel
- GA DNR has authority to close all or any portion of state waters for up to 6 months if deemed necessary

TC Recommendation: **Approve**





# Implementation Plan Review – Commercial Measures

All states provided appropriate regulatory language to show compliance with commercial measures

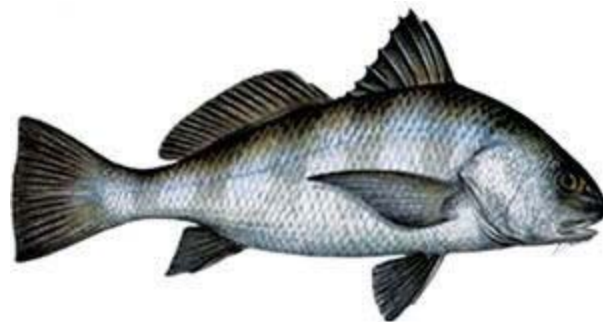
- South Carolina: Gamefish, no commercial harvest

# Questions?





# **Draft Addendum I to the Black Drum Interstate Fishery Management Plan**



Presented to ASMFC South Atlantic  
Board

February 7, 2018

# Timeline



Board Initiated Addendum I	October 2017
Plan Development Team Developed Draft Addendum I	October 2017- January 2018
<b>Board Considers Draft Addendum I for Public Comment</b>	<b>February 2018</b>
(Pending Board Approval) Public Comment on Draft Addendum I	February-April 2018
(Pending Board Approval) Board Considers Final Action on Draft Addendum I	May 2018
(Pending Board Approval) Addendum I Implementation	TBD

# Background



- Historical MD Chesapeake Bay fishery – May through early June
  - No commercial harvest restrictions until 1994: 16 in TL minimum size and 30,000 lb annual Ches. Bay quota
  - Annual average harvest (1973-1997): 11,475 lbs
- Tagging study conducted in late 1990's to collect biological and migration information
  - No commercial sale from Chesapeake Bay, but DNR may buy back black drum from pound net fishermen
- Tagging study and buy back ended in 1999, leading to a closed Chesapeake Bay commercial fishery

# Background



- 2013 – ASMFC approved Black Drum FMP
  - “In order to avoid the establishment of any new commercial fisheries for black drum, all states shall maintain their current level of restrictions, i.e. no relaxation of current commercial fisheries management measures.”
- Current Ref. Points (2015 assessment) and Harvest
  - Status: Not overfished and overfishing not occurring
  - Harvest Target: 2.12 million lbs
  - Harvest Threshold: 4.12 million lbs
  - 2016 Total Harvest: 1.53 million lbs

# Current Regulations (Table 1)



State	Recreational		Commercial			Notes
	Size limit	Bag limit	Size limit	Trip Limit	Annual Quota	
ME - NY	-	-	-	-	-	
NJ	16" min	3/person/day	16" min	10,000 lbs	65,000 lbs	
DE	16" min	3/person/day	16" min	10,000 lbs	65,000 lbs	
MD	16" min	1/person/day 6/vessel (Bay)	16" min		1,500 lbs Atlantic Coast	<b>Chesapeake Bay closed to commercial harvest</b>
VA	16" min	1/person/day	16" min	1/person/day*	120,000 lbs	*without Black Drum Harvesting and Selling Permit
NC	14" min - 25" max; 1 fish > 25" may be retained	10/person/day	14" min - 25" max	500 lbs		
SC	14" min - 27" max	5/person/day	14" min - 27" max	5/person/day		Commercial fishery primarily bycatch
GA	14" min	15/person/day	14" min	15/person/day		
FL	14" min - 24" max; 1 fish >24" may be retained	5/person/day	14" min - 24" max	500 lbs/day		

# Management Options



- 1. Status Quo:** Current FMP remains in place, with Chesapeake Bay closed to commercial harvest by the state of Maryland.
- 2. Reopen Maryland's commercial fishery for black drum in the Chesapeake Bay with a 10 fish daily vessel limit and a 28 inch minimum total length size limit.**



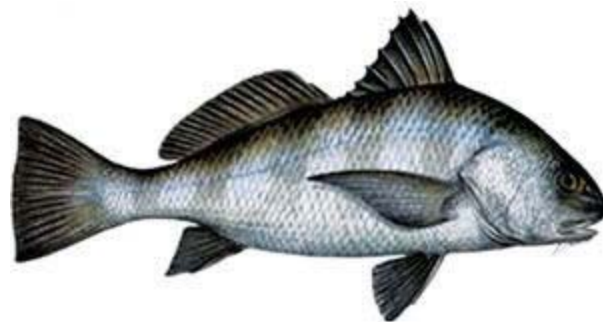
# Management Options



- 2. Reopen Maryland's commercial fishery for black drum in the Chesapeake Bay with a 10 fish daily vessel limit and a 28 inch minimum total length size limit.**
  - Previous commercial harvests from less restrictive regulations (1973-1997) averaged 11,475 lbs with a max of 41,552 lbs
  - Addition of the average or maximum historical harvests would increase the 2016 coastwide total harvest (1.53 million lbs) by 0.8% or 2.8%, respectively



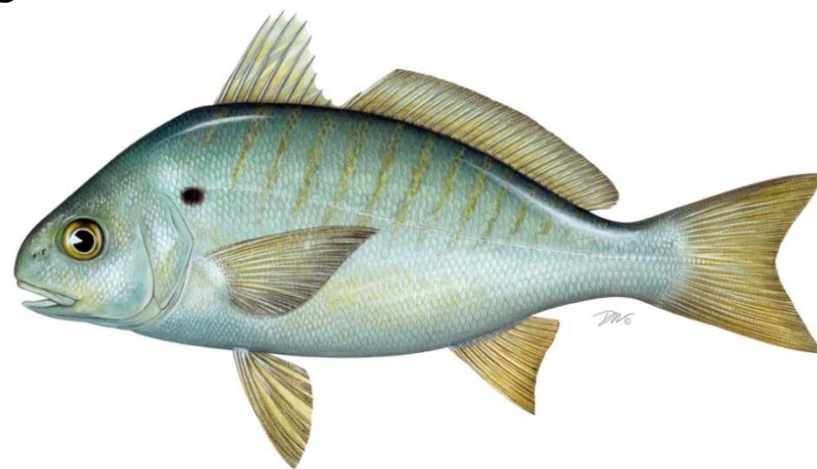
# Questions/Board Discussion or Motion?





# Proposed Changes to the TLA for Spot and Atlantic Croaker

Atlantic States Marine Fisheries Commission  
South Atlantic Fisheries Management Board  
Winter Meeting: Arlington, Virginia  
February 7, 2018



# Background



- Spot/croaker underwent a benchmark assessment in 2017
  - Not endorsed by the peer review panel for management due in part to conflicting signals from abundance and harvest time series.
- Both species monitored using an annual traffic light approach (TLA) established in 2014
  - TLA assigns a color (red, yellow, or green) to categorize relative levels of indicators on the condition of the fish population (abundance metric) or fishery (harvest metric)
  - Management action if both abundance and harvest are tripped for 2 consecutive yrs (spot) or 3 consecutive yrs (croaker) : >30% red moderate concern, >60% red significant concern

# TLA Concerns

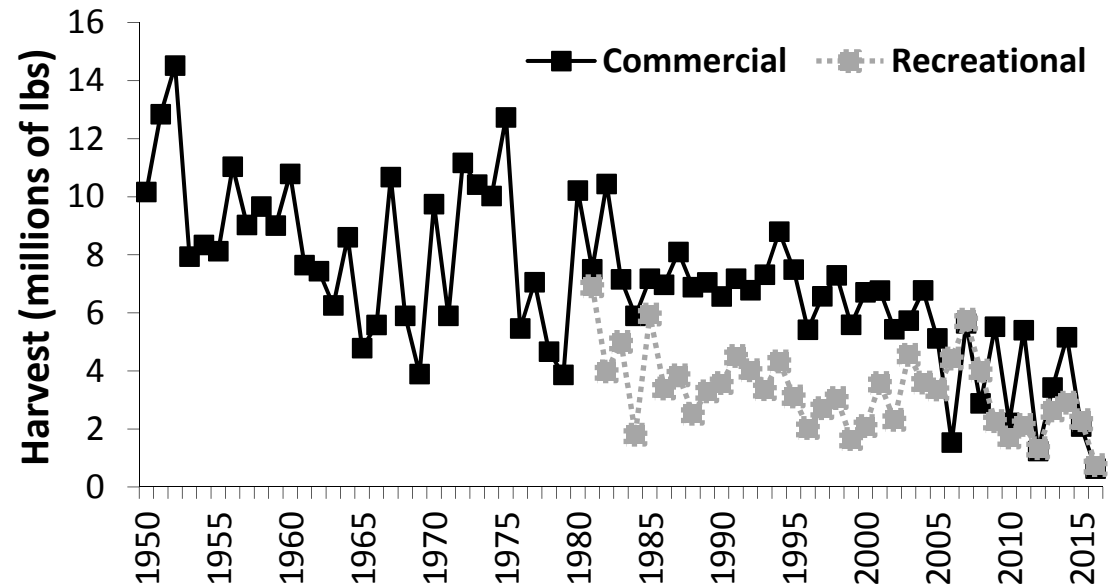


- Current TLAs have not triggered management action despite declining trends in harvest, to some of the lowest values on record.
- Several abundance indices developed for the assessments are not included in the current TLA.
- TLA-SC began re-evaluating all available data for spot and croaker
  - Redeveloped to split indices into recruitment indices and adult indices
  - Reconsidered which indices should be included in TLA (inshore vs offshore, Mid-Atlantic vs South Atlantic)

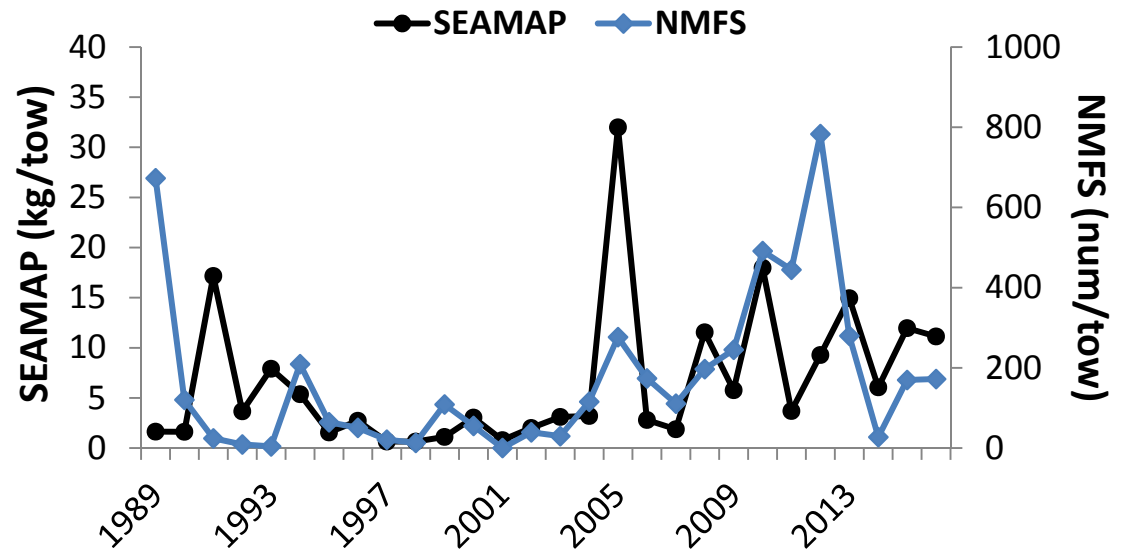
# Spot Landings & Indices



- Continued decline in landings cause for concern for spot



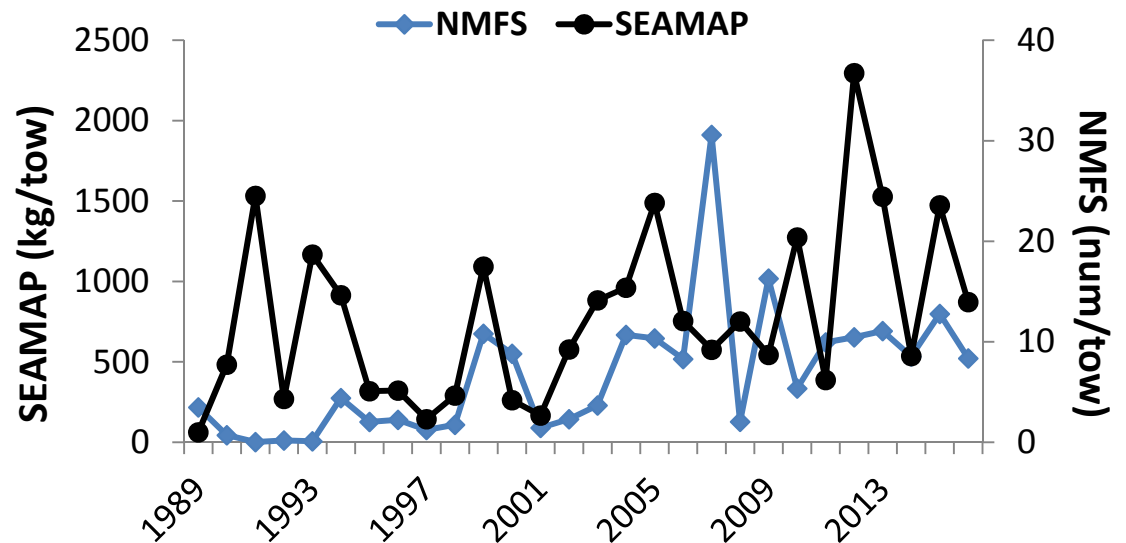
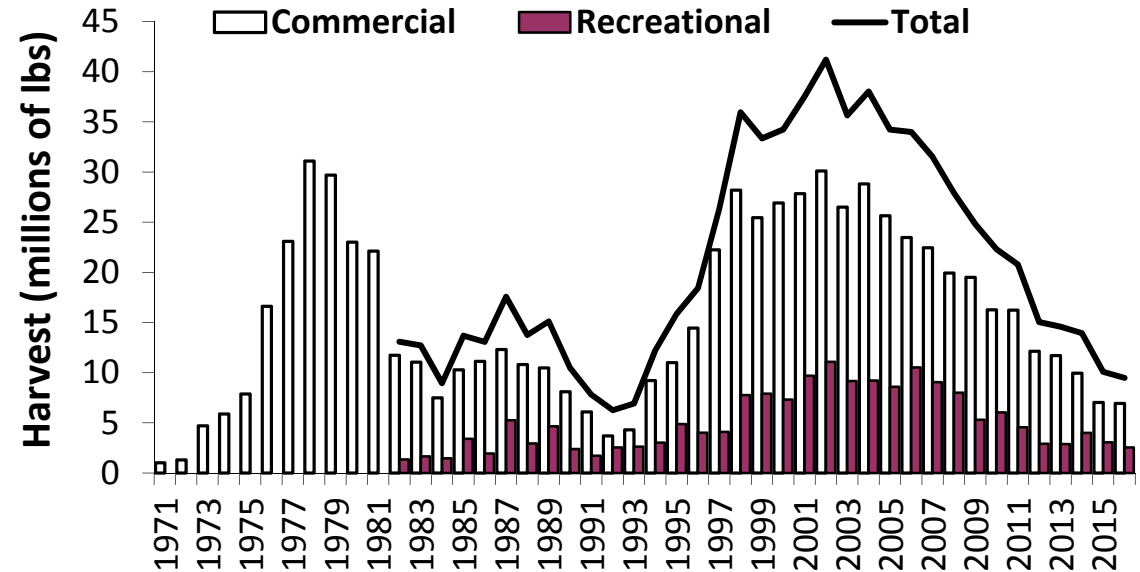
- Adult indices exhibit some high abundance years that are not reflected in the fishery



# Croaker Landings & Indices



- Continued decline in landings cause for concern for croaker
- Adult indices exhibit some high abundance years that are not reflected in the fishery



# Data Exploration - Conclusions



- Recruitment signal similar along the coast, but declining trend started earlier in Chesapeake Bay and showed up last offshore
- SEAMAP and NMFS indices currently used in the TLA are driven by recruitment signal
- Differences in exploitation by region
- SEAMAP spring survey tracks year classes better than fall survey



# TLA Options

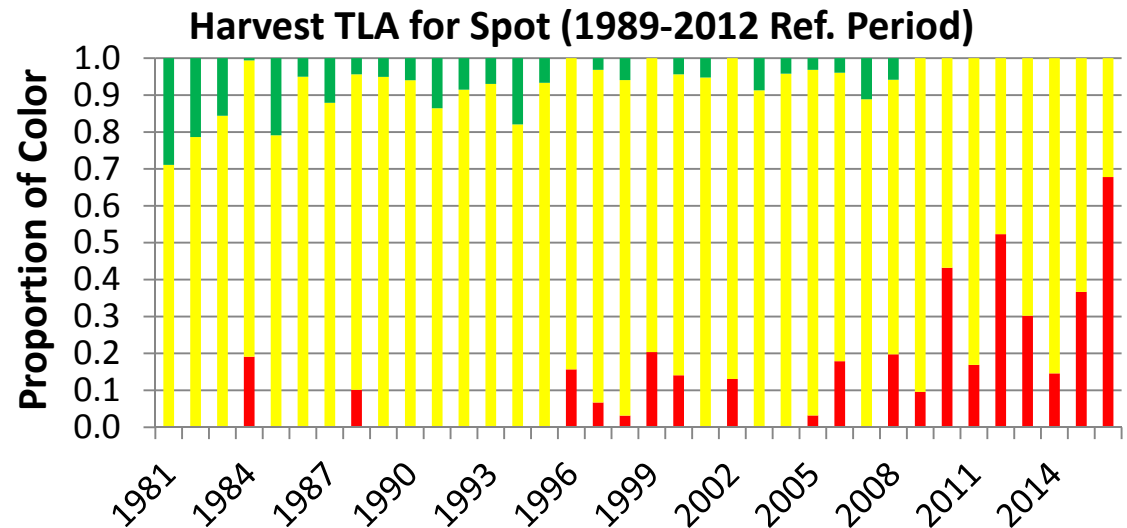


- I. Status Quo
- II. Coastwide TLA with Revised Indices
- III. Regional TLA with Revised Indices
- IV. Relative Exploitation

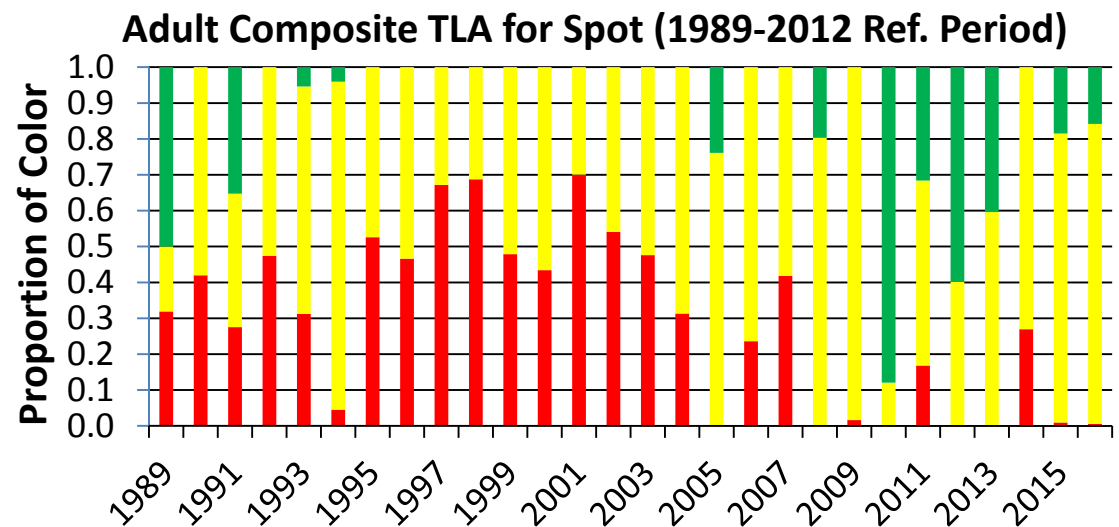
# 2016 TLA for Spot (status quo)



- Harvest (commercial and rec) – tripped in 2010, 2012, 2013, 2015, 2016



- Adult abundance composite (NMFS and SEAMAP surveys) – hasn't tripped since 2007



# TLA vs Relative Exploitation

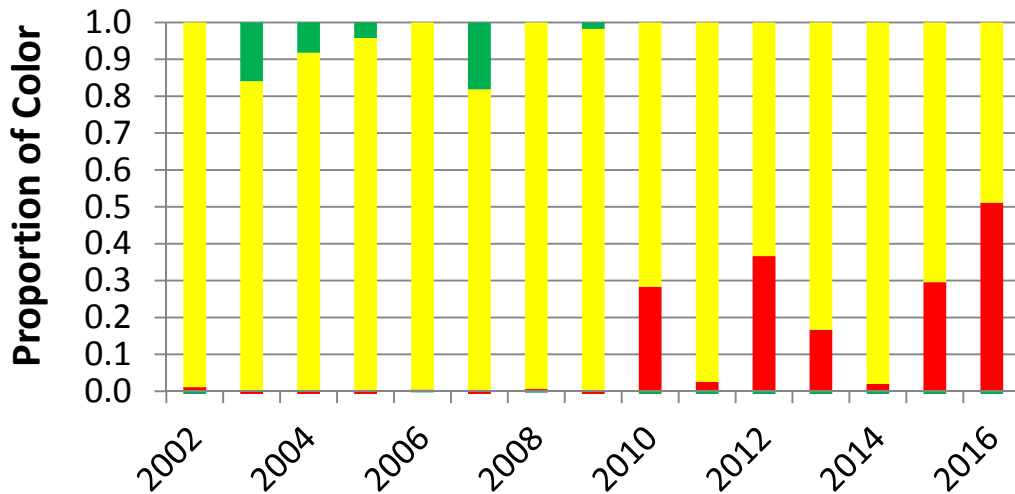


- Current TLA abundance metric was not reflecting declines in abundance, but can be addressed with index selection.
  - Harvest remaining high enough not to trigger despite declining abundance = increase in exploitation relative to earlier years.
- Relative Exploitation
  - Years of high abundance only interpreted as a good situation if harvest is also relatively high
  - Used to address situation where declines in abundance counteracted by increasing proportion of the abundance removed
  - Need protective measures in case of abundance and harvest declining at same rate over time
  - Relative exploitation methods were very conservative and would need more work on determining the appropriate reference points at this point.
- ❖ **The TC came to the consensus to continue with the TLA in age adjusted index form because of its more familiar form and intuitive understanding.**

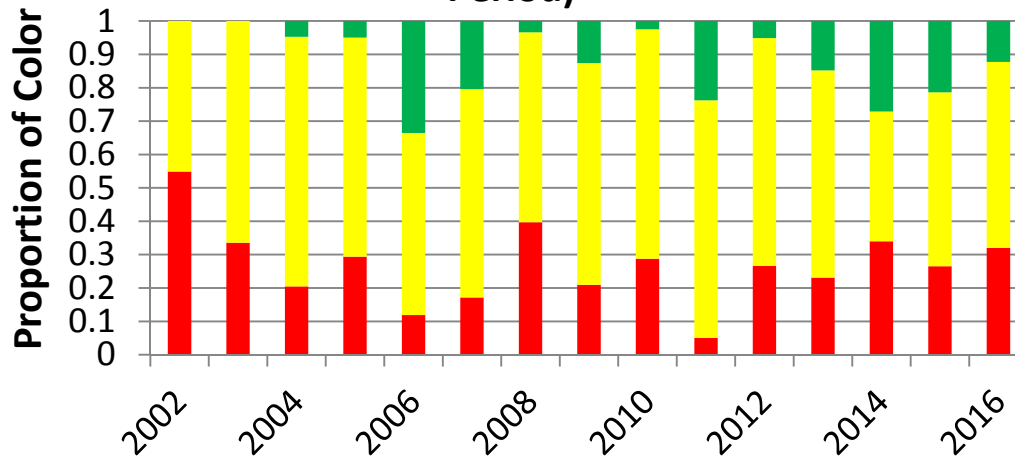
## 2. Coastwide TLA w/ Revised Indices



Harvest TLA for Spot (2002-2012 Ref. Period)

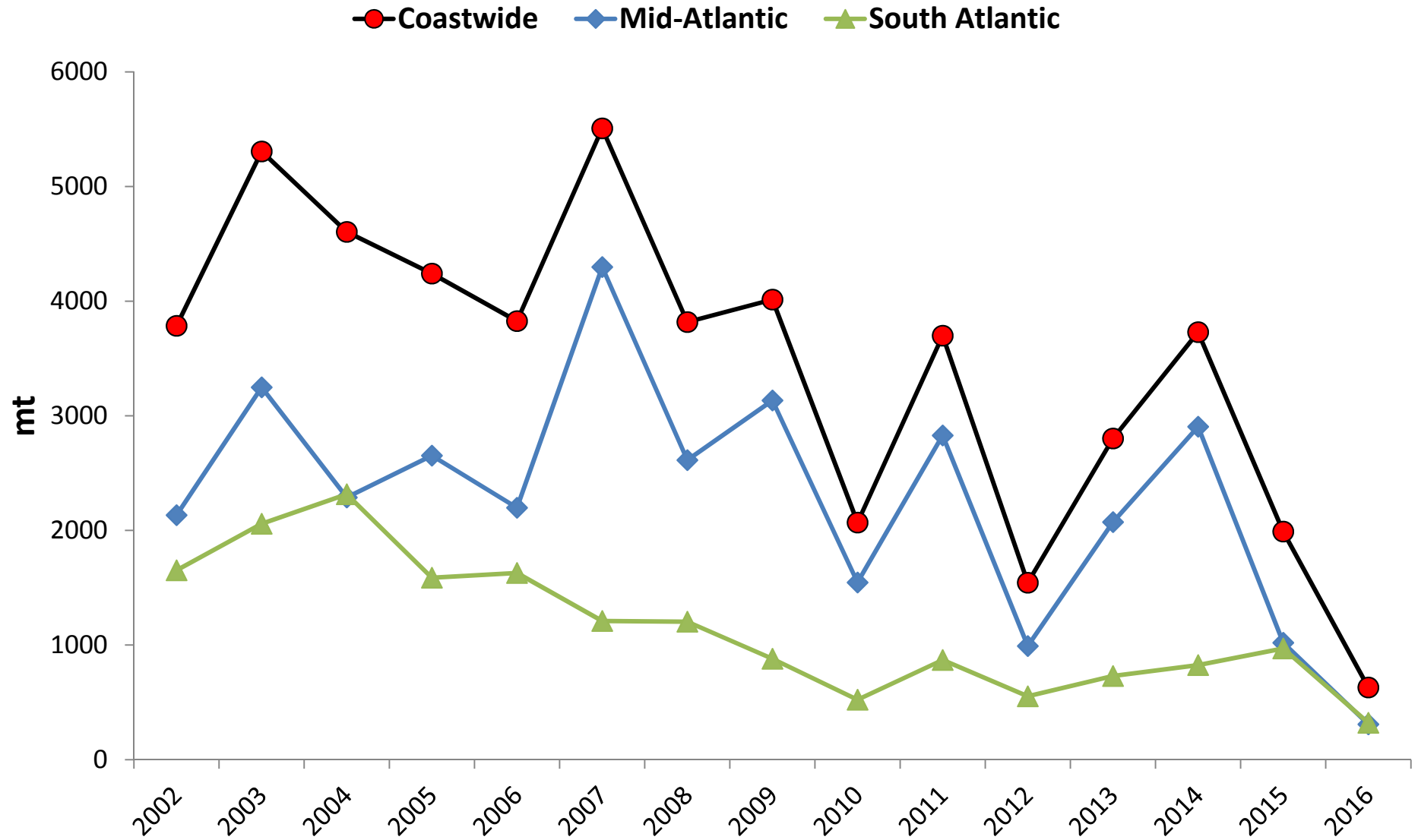


Adult Composite TLA for Spot (2002-2012 Ref. Period)



- Adult composite
  - Indexes included: NMFS, ChesMMAP, NCDMF Prog. 195, and SEAMAP.
  - 2002-2012 reference period to match time frame of ChesMMAP.
- Harvest TLA also used 2002-2012 reference period
- Management would be triggered if 2 out of the 3 terminal years have been tripped based on previous guidelines

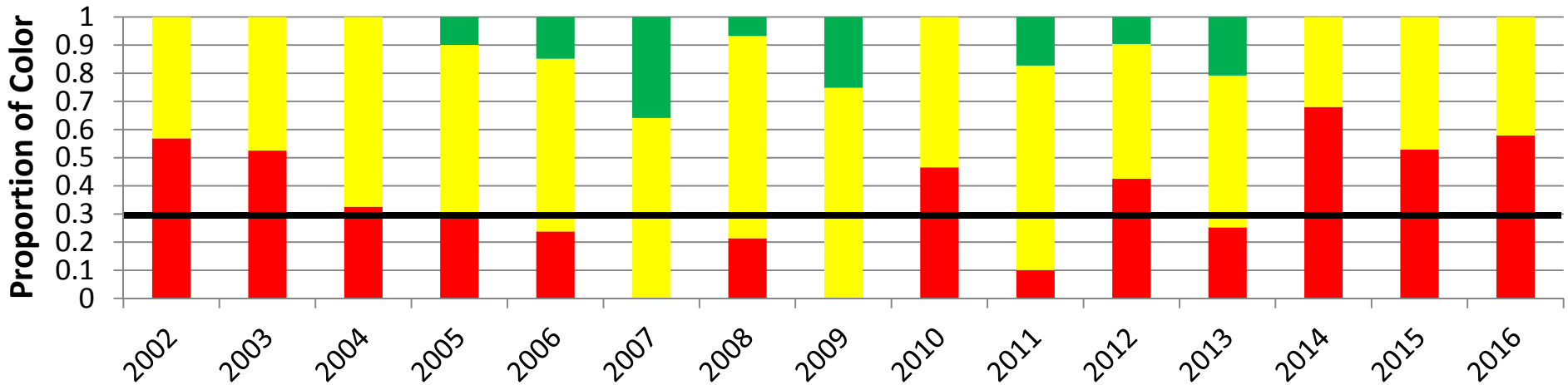
# Regional Spot Landings



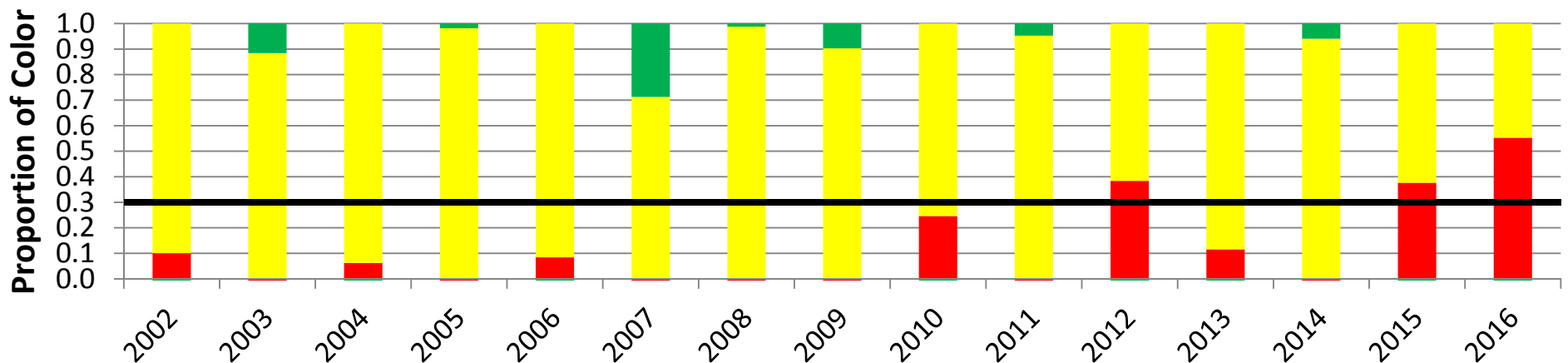
# 3. Regional TLA w/Revised Indices



### Mid-Atlantic Adult Composite TLA for Spot (2002-2012 Ref. Period)



### Mid-Atlantic Harvest TLA for Spot (2002-2012 Ref. Period)

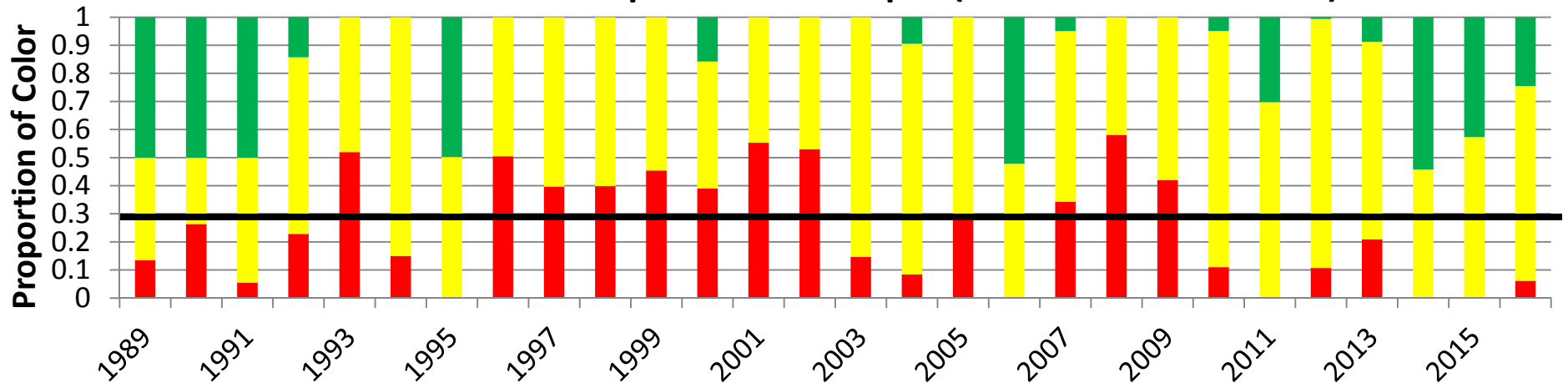


- Adult composite would cause concern in 2002-2005, 2010, 2012, 2014-2016
- Mid-Atl harvest would cause moderate concern in 2012, 2015-2016

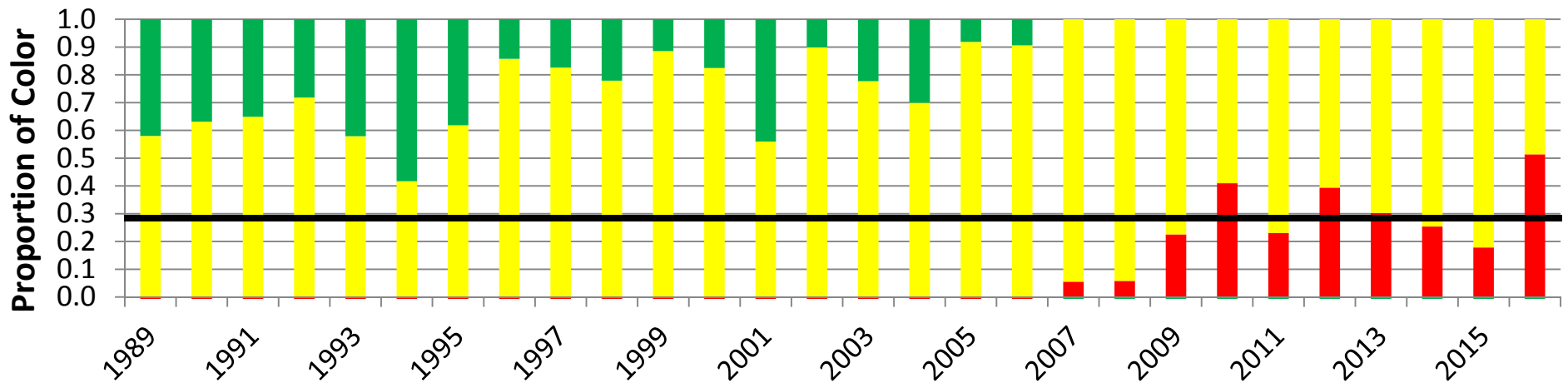
# 3. Regional TLA w/Revised Indices



South Atlantic Adult Composite TLA for Spot (2002-2012 Ref. Period)



South Atlantic Harvest TLA for Spot (2002-2012 Ref. Period)



- S Atl adult composite would be cause for concern in 1993, 1996-2002, 2007-2009
- S Atl harvest would be cause for moderate concern 2010, 2012-2013, 2016

# TC Recommendations for Spot TLA



- Incorporation of indices from ChesMMAAP and the North Carolina Division of Marine Fisheries (NCDMF) Pamlico Sound Survey, Program 195, into the adult composite characteristic index, in addition to the currently used NEFSC and SEAMAP indices.
- Use of 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.
- Use of regional metrics to characterize the fisheries north and south of the Virginia-North Carolina state border. The ChesMMAAP 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.
- Continue to utilize recruitment index TLA and annual southeastern shrimp trawl fishery bycatch estimates as advisory or informational indices annually.
- Change/establish the reference time period for all surveys to be 2002-2012.
- 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.





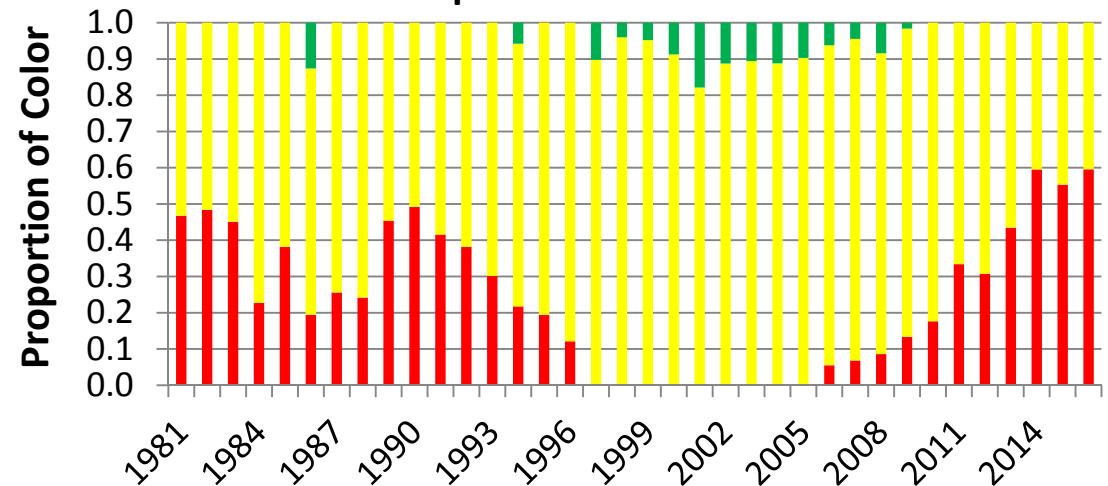
Now do it again for croaker!

# 2016 TLA for Croaker (status quo)

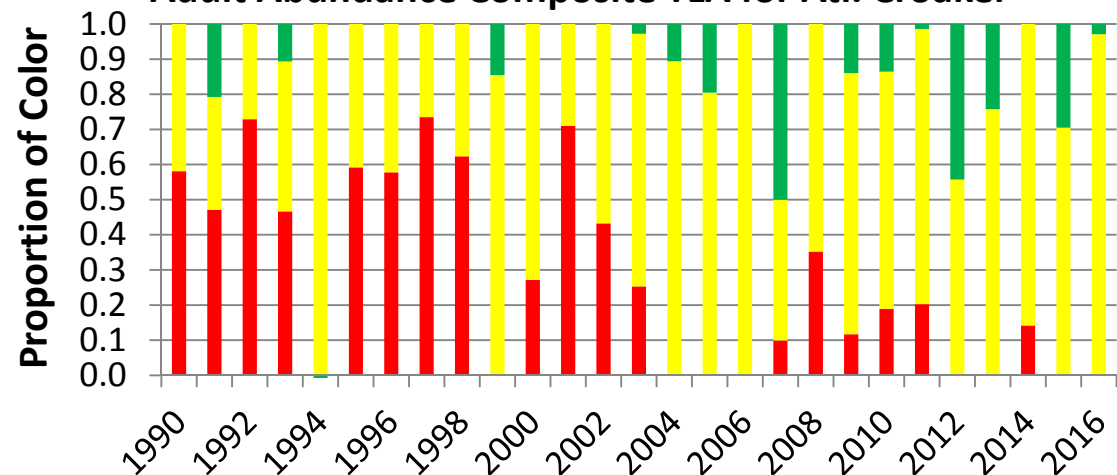


- Harvest (commercial and rec) metric tripped for the sixth consecutive year
- Adult abundance composite (NMFS and SEAMAP surveys) no concern since 2002

Harvest Composite TLA for Atl. Croaker



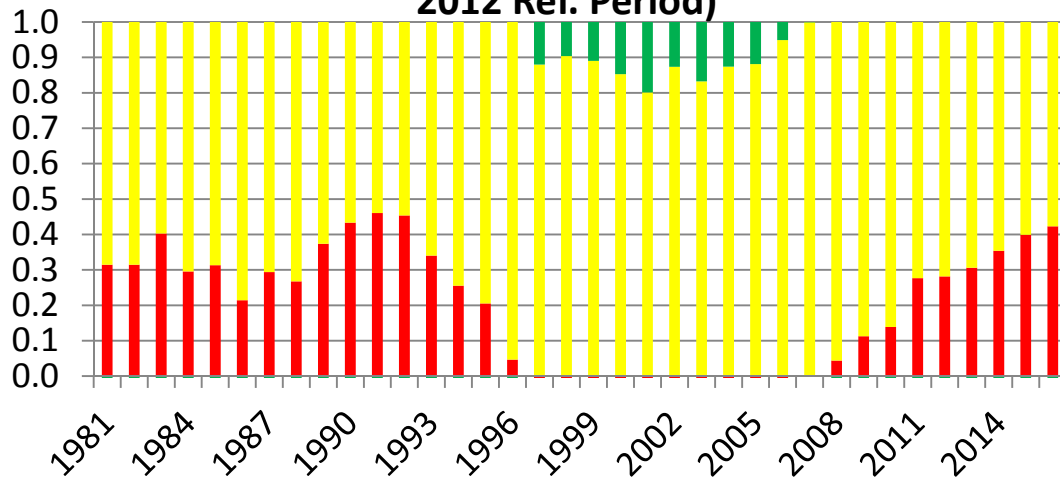
Adult Abundance Composite TLA for Atl. Croaker



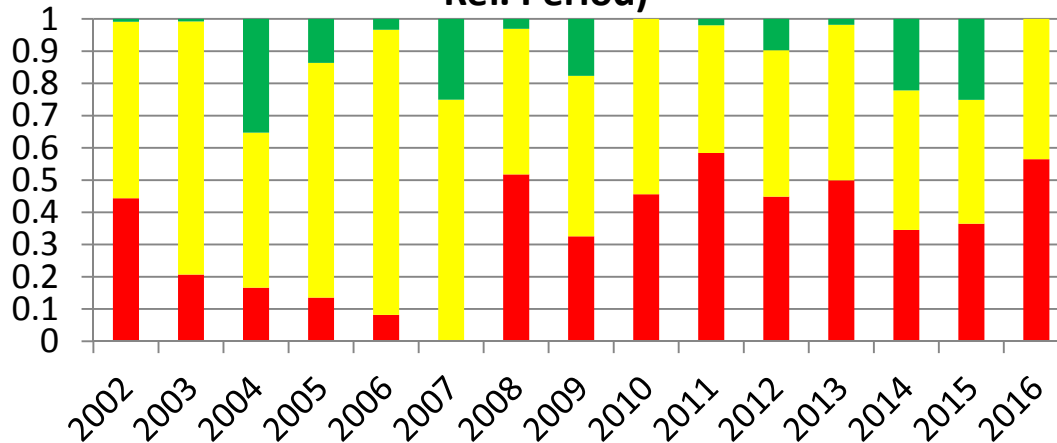
## 2. Coastwide TLA w/ Revised Indices



Harvest Composite TLA for Atl. Croaker (2002-2012 Ref. Period)

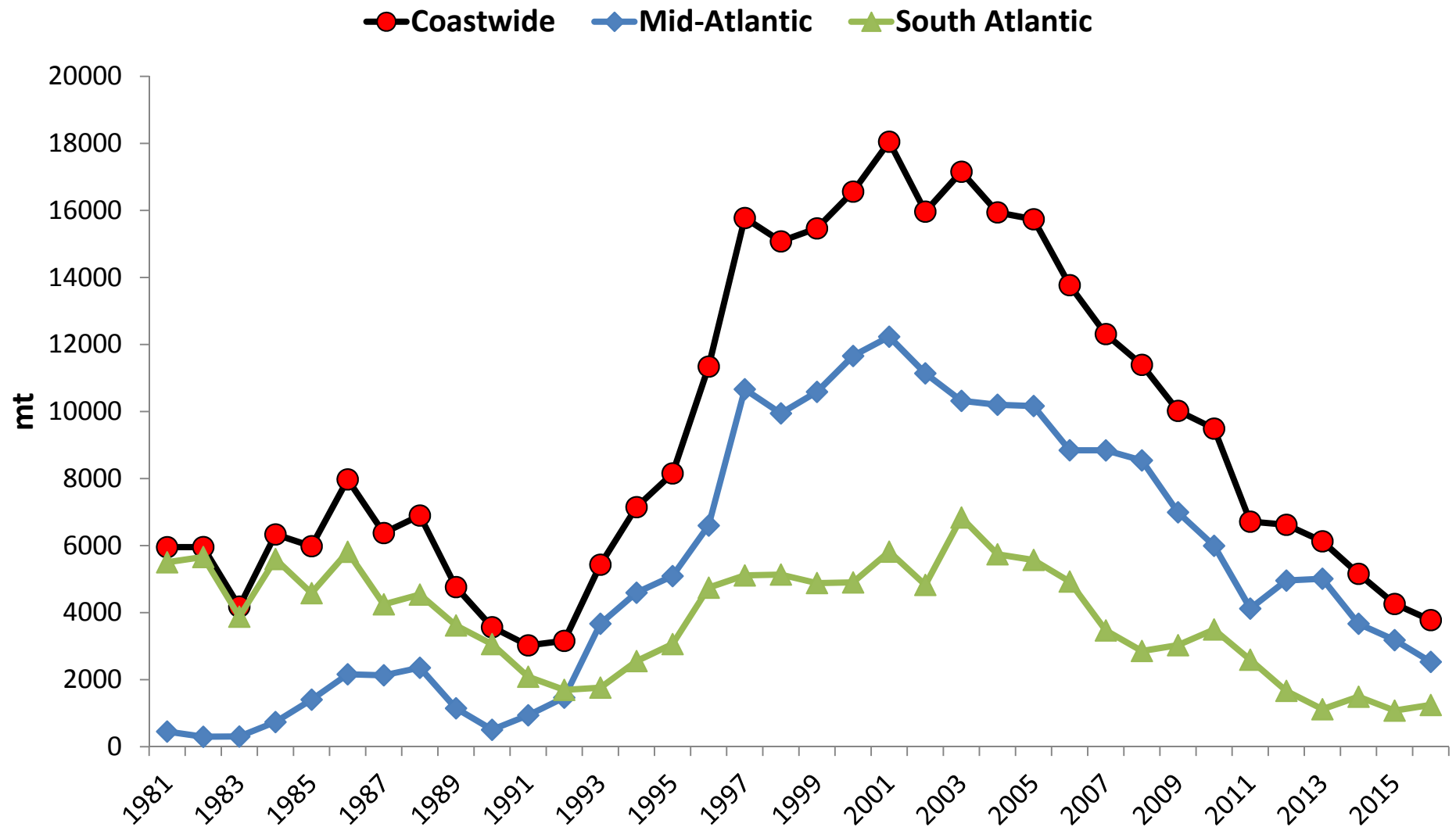


Adult Composite TLA for Atl. Croaker (2002-2012 Ref. Period)



- Harvest metric showing long term trends using 2002-2012 reference period.
- Adult composite (with 4 indices), using 2002-2012 reference period.
  - Indices included NMFS, ChesMMAP, SEAMAP and SCDNR Trammel Net survey.
- Management would be triggered if 2 out of the 3 terminal years have been tripped based on previous guidelines

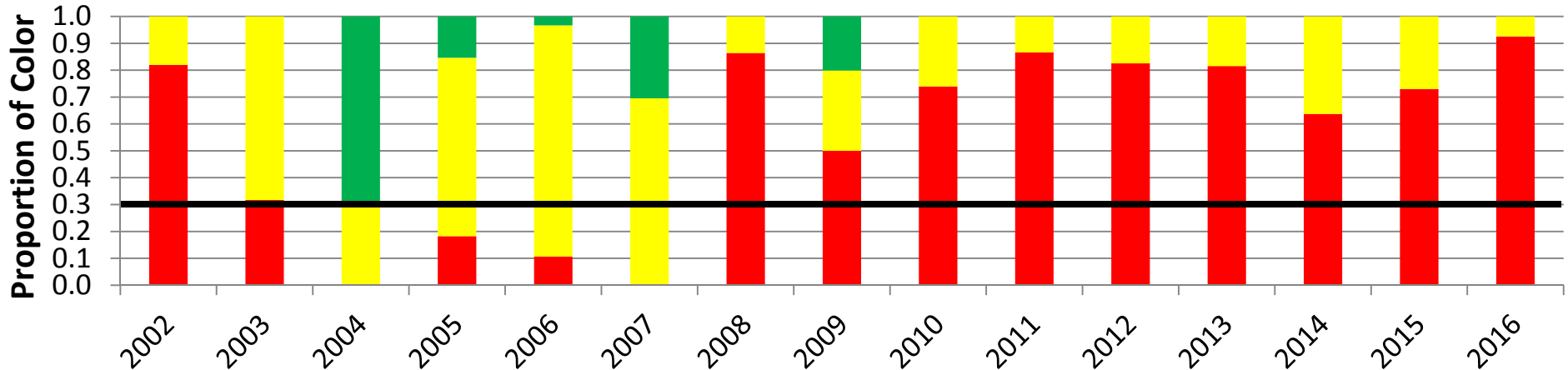
# Regional: Croaker Landings



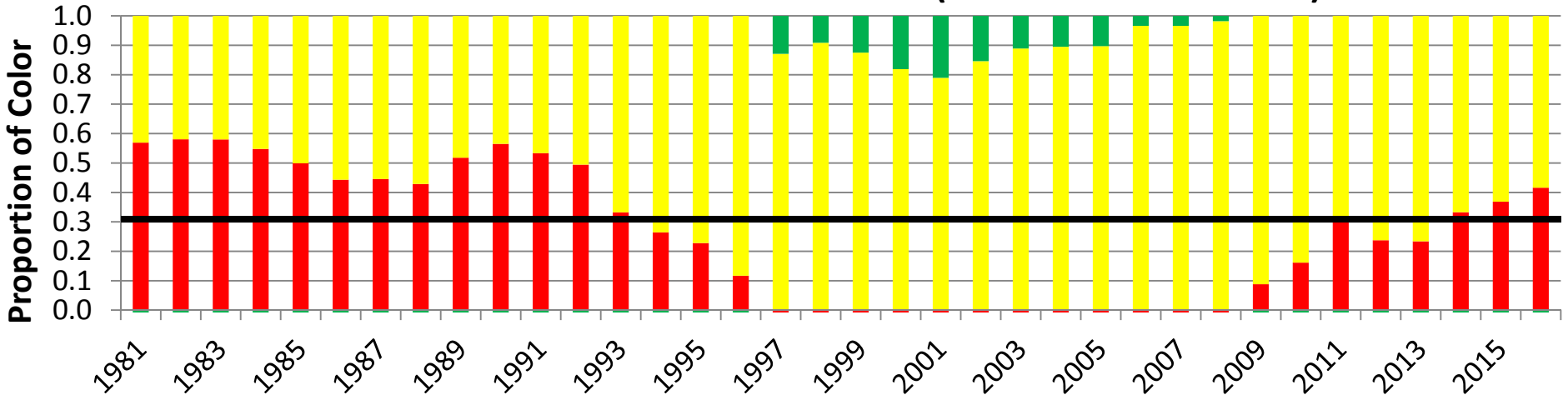
# 3. Regional TLA w/Revised Indices



### Mid-Atlantic Adult Composite TLA for Atl. Croaker (2002-2012 Ref. Period)



### Mid-Atlantic Harvest TLA for Atl. Croaker (2002-2012 Ref. Period)

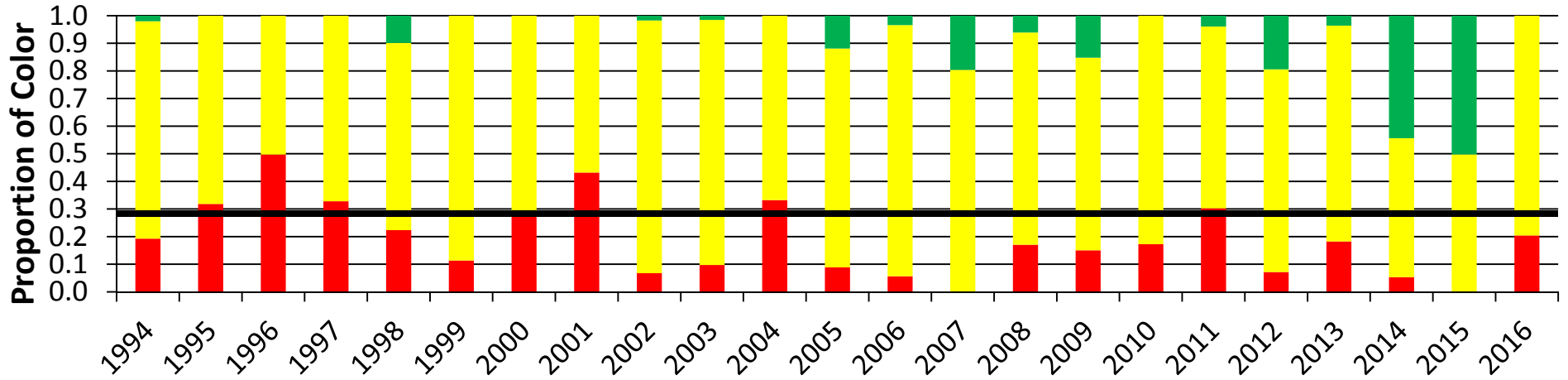


- Mid-Atl adult composite would be cause for concern 2002-2003, 2008-2016
- Mid-Atl harvest would be cause for concern 1981-1993, 2014-2016

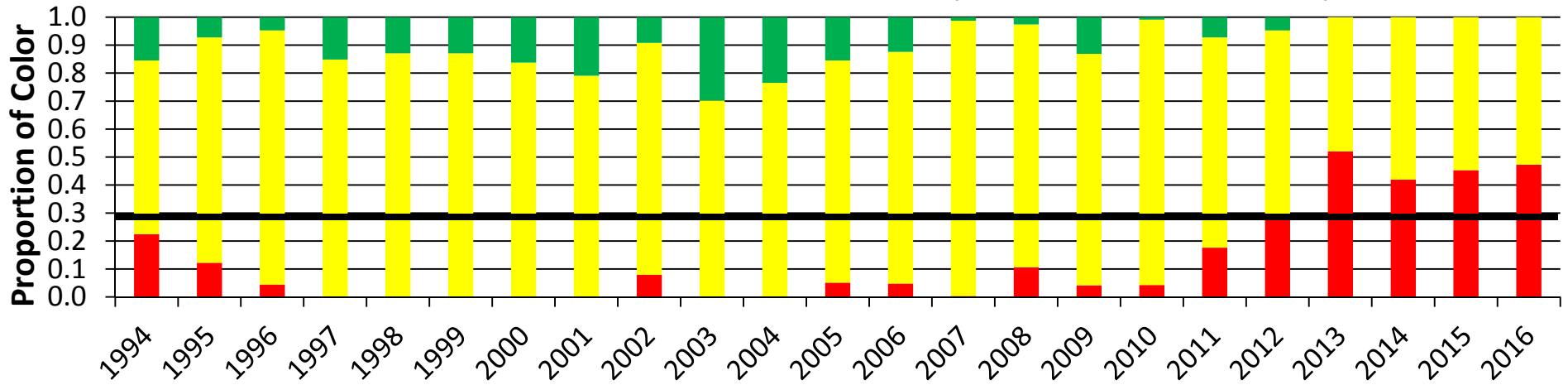
# 3. Regional TLA w/Revised Indices



**South Atlantic Adult Composite TLA for Atl. Croaker (2002-2012 Ref. Period)**



**South Atlantic Harvest TLA for Atl. Croaker (2002-2012 Ref. Period)**



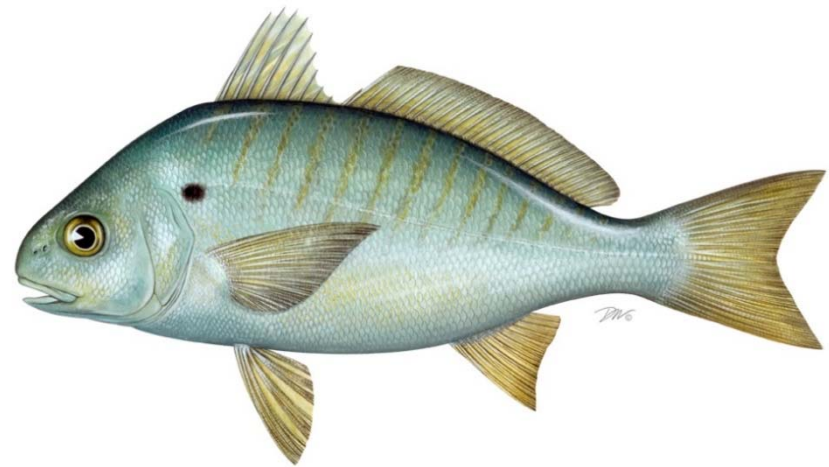
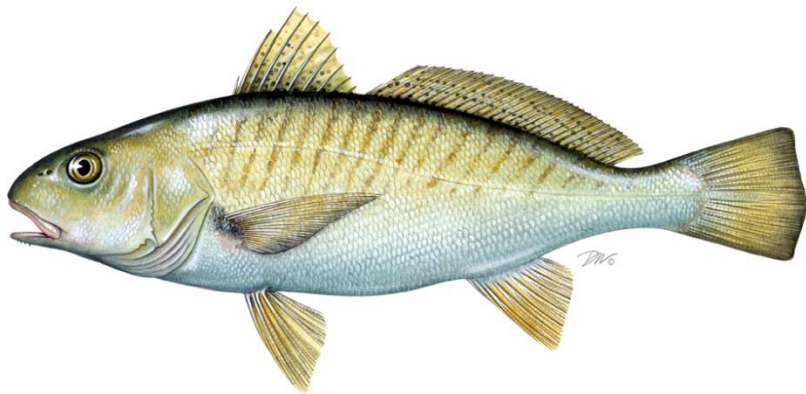
- S Atl adult composite would be cause for concern 1995-1997, 2001, 2004, 2011
- S Atl harvest would be cause for concern for 2012-2016

# TC Recommendations for Croaker TLA



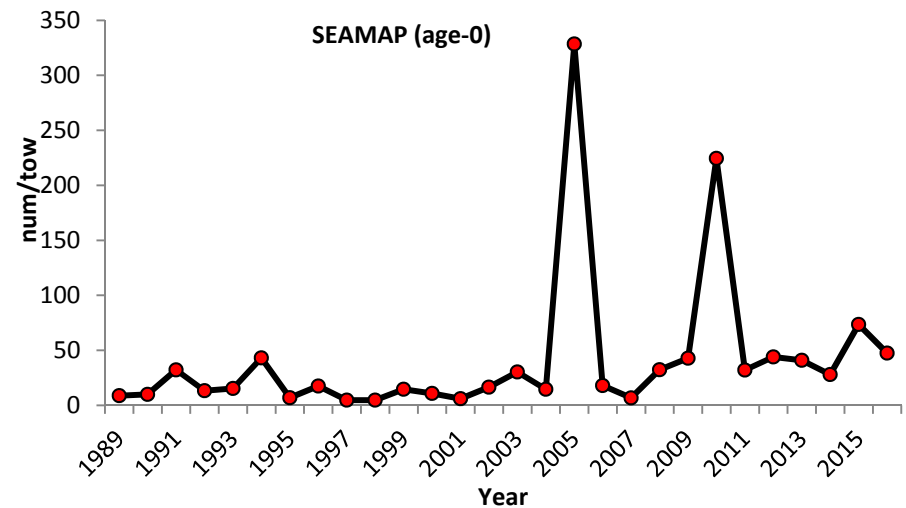
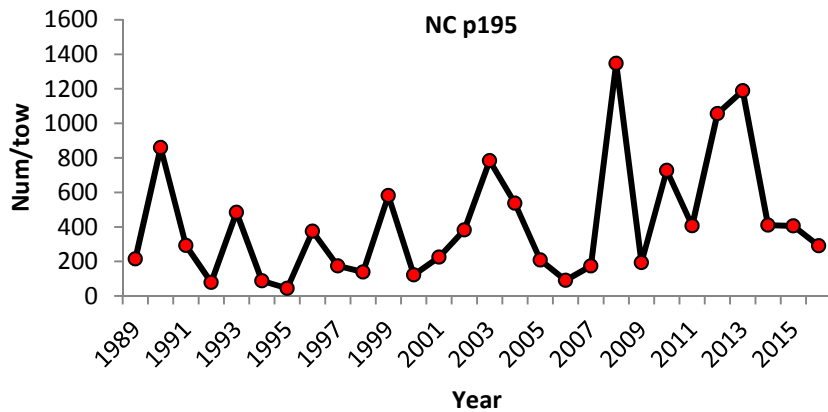
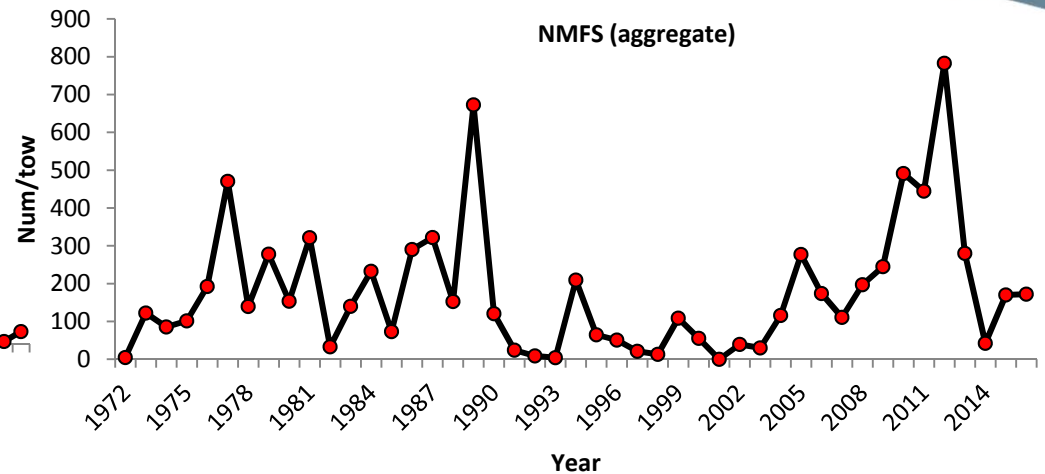
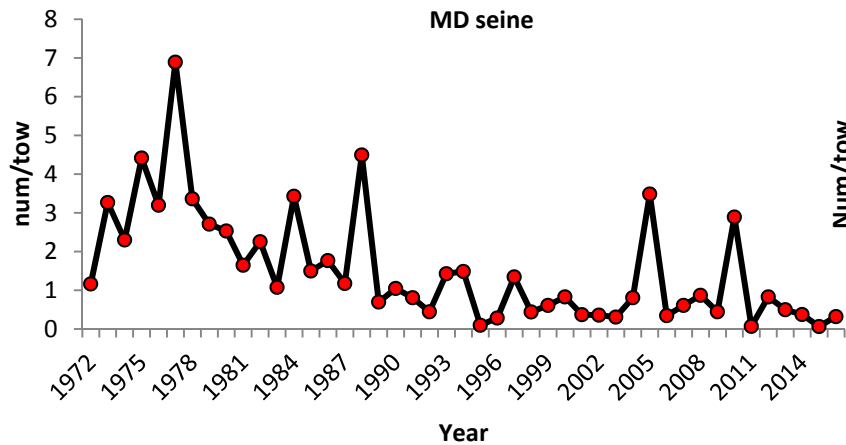
- Incorporation of indices from the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the South Carolina Department of Natural Resources (SCDNR) Trammel Net Survey into the adult composite characteristic index, in addition to the currently used indices from the Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey and Southeast Area Monitoring and Assessment Program (SEAMAP).
- Use of 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 2+) individuals caught by each survey.
- Use of regional metrics to characterize 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 SCDNR Trammel Net and SEAMAP surveys would be used to characterize abundance south of the VA-NC border.
- Continue to utilize recruitment index TLA and annual southeastern shrimp trawl fishery bycatch estimates as advisory or informational indices annually.
- Change/establish the reference time period for all surveys to be 2002-2012.
- 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.

# QUESTIONS ?





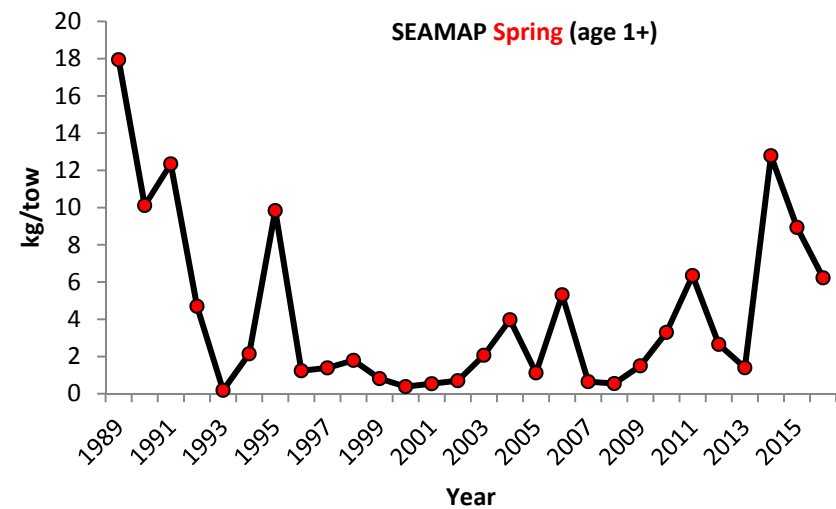
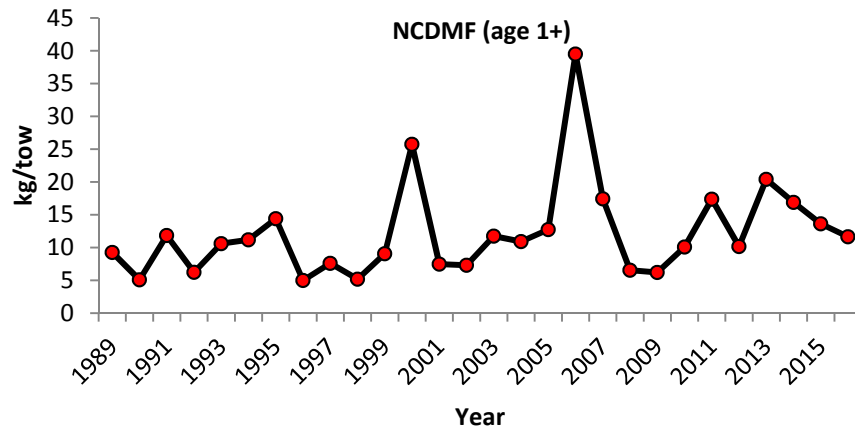
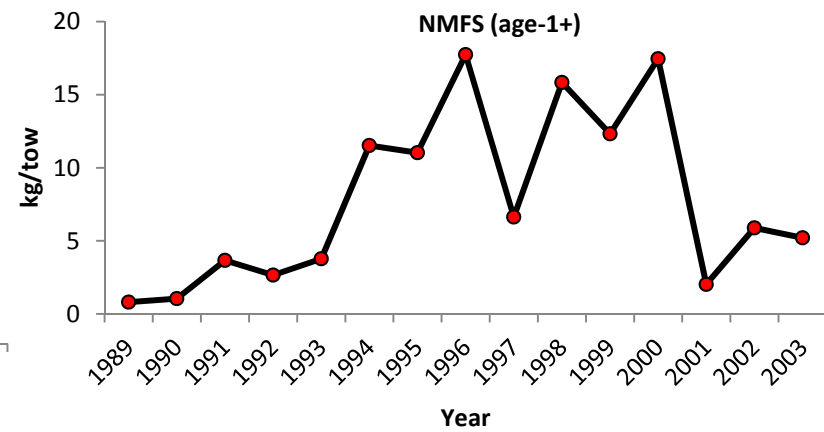
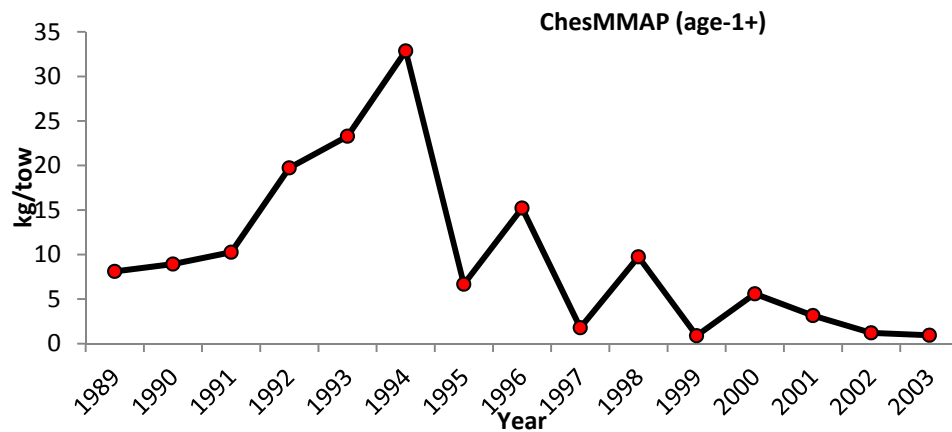
# Revised Spot Indices - Juvenile



# Revised Spot Indices - Adults



- Mid-Atlantic inshore, offshore and a South Atlantic inshore, offshore

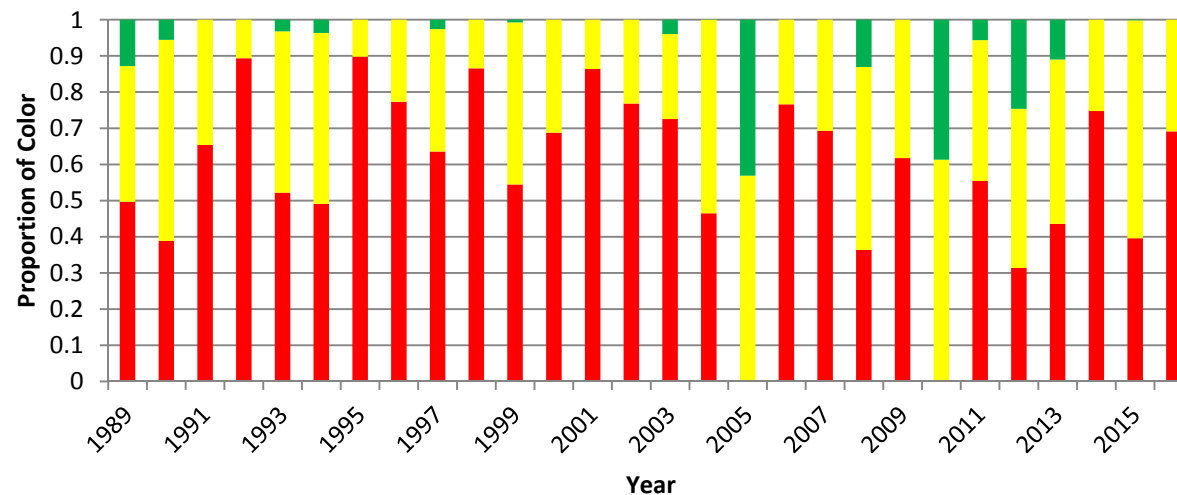


# 3. Regional TLA w/Revised Indices



- Similar to Option 2, but split by Mid-Atlantic and South Atlantic since the regions do have different patterns
- Juvenile composite still provided for reference

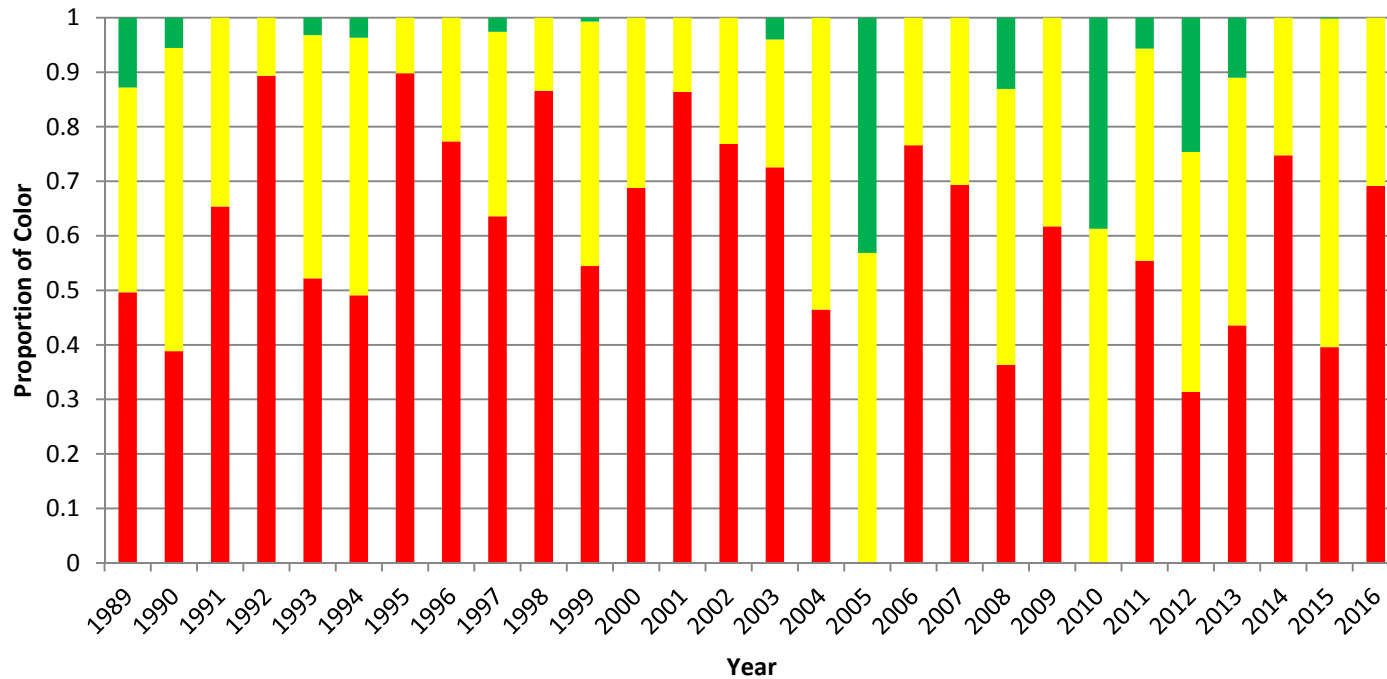
Annual TLA color proportions for spot from the recruitment composite index based on a 2002-2012 reference period



# Spot TLA: Juvenile



Annual TLA color proportions for spot from the recruitment composite index based on a 2002-2012 reference period

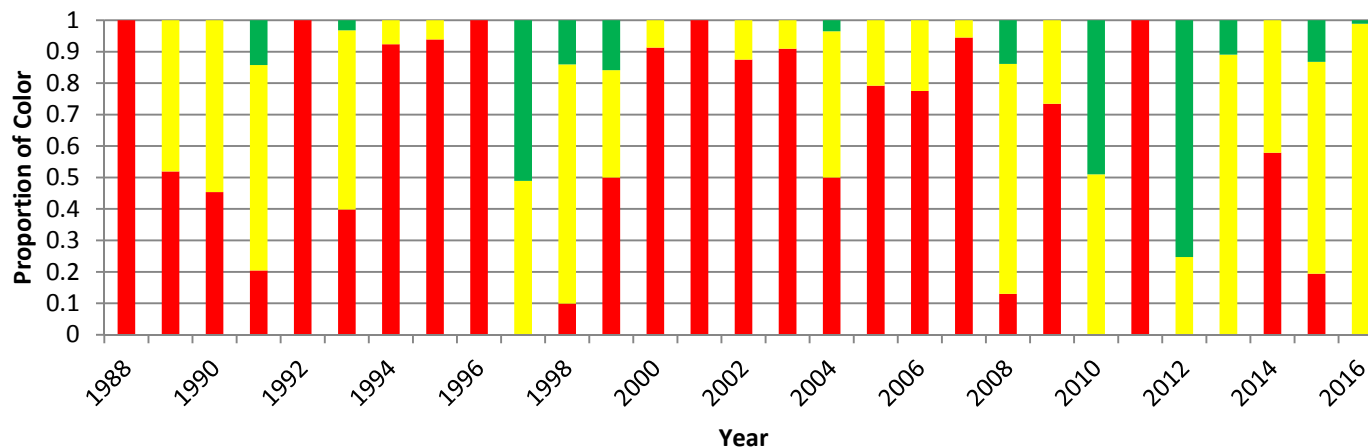


# 3. Regional TLA w/Revised Indices



- Similar to Option 2, but split by Mid-Atlantic and South Atlantic since the regions do have different patterns
- Juvenile composite still provided for reference

Annual TLA color proportions for Atlantic croaker from the recruitment composite index based on a 2002-2012 reference period

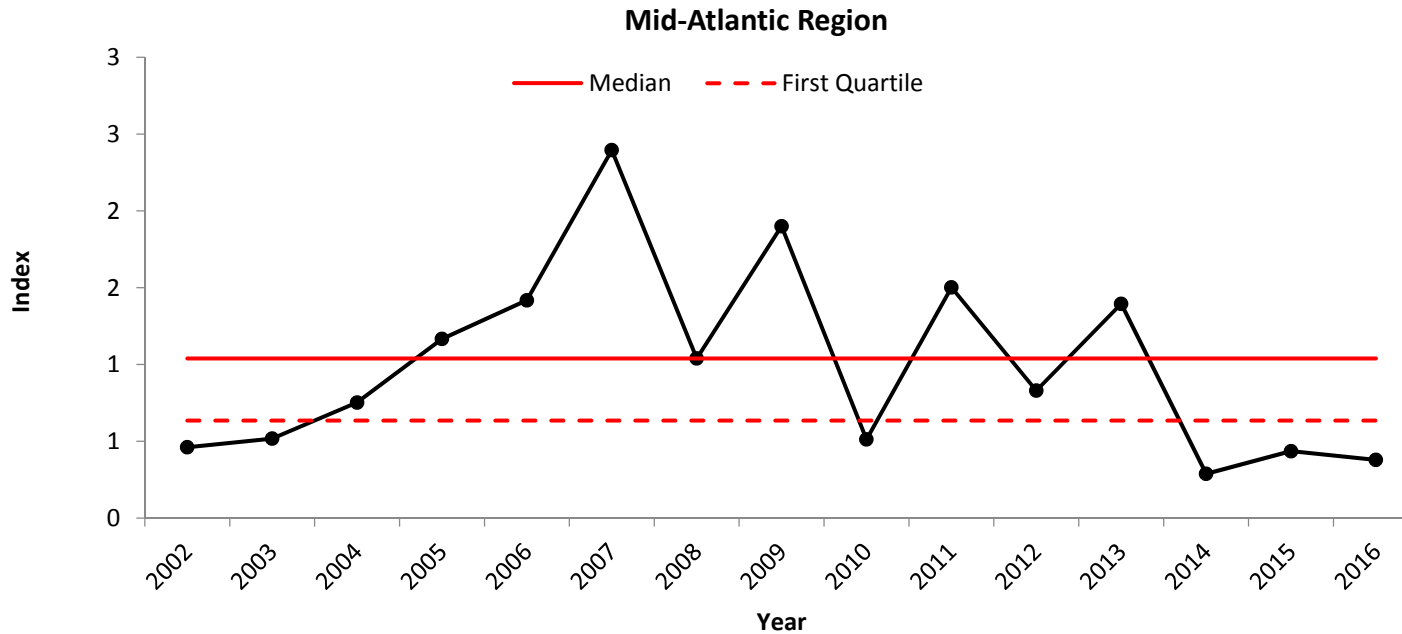
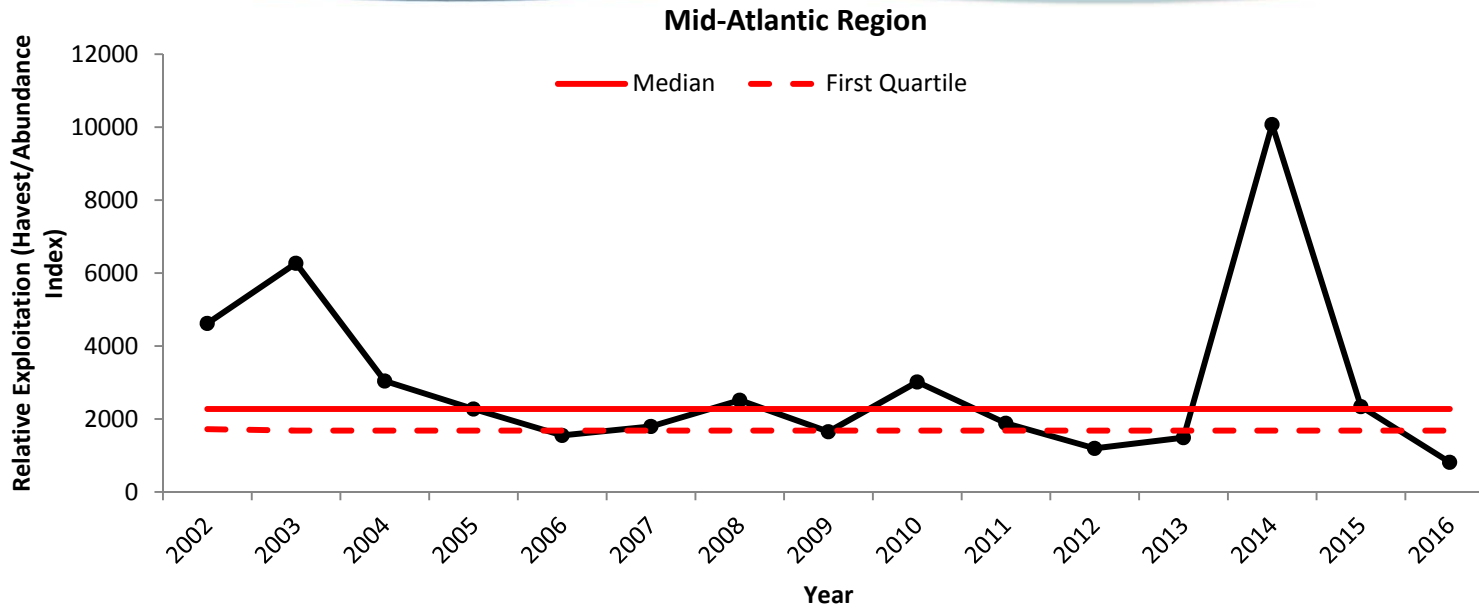


# 4. Relative Exploitation

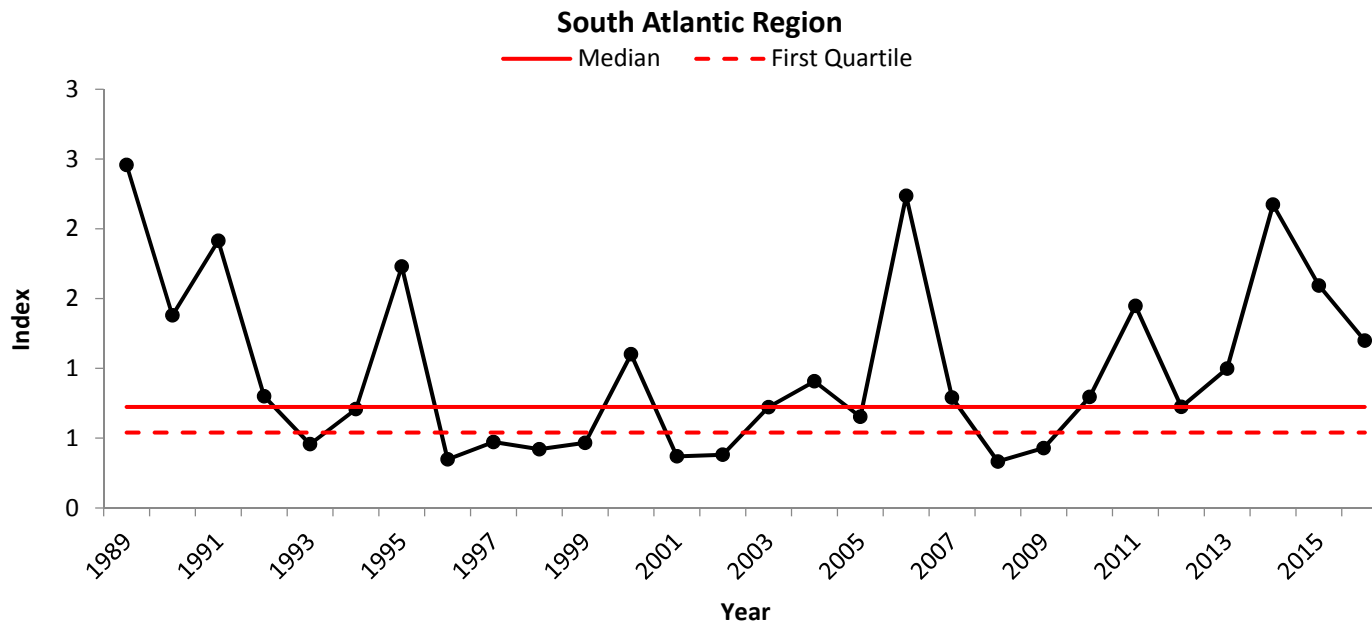
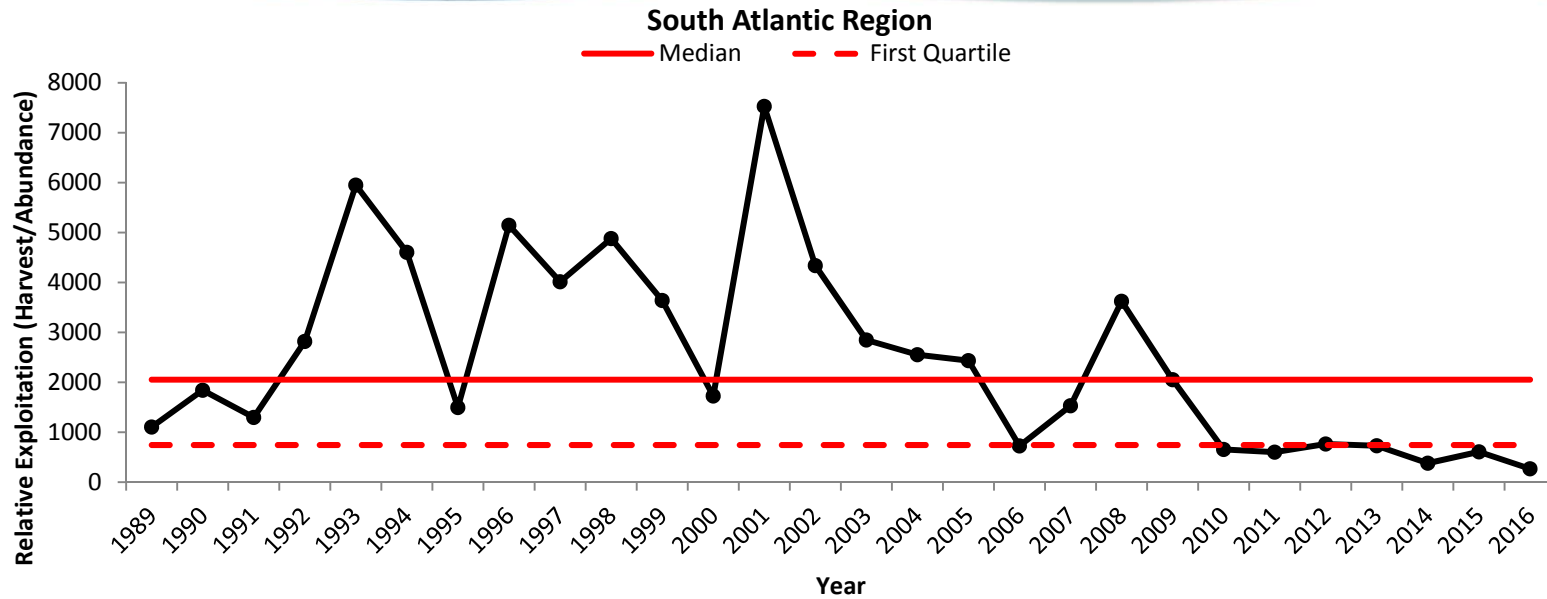


- Done regionally as the harvest/composite indices
- Management triggers for relative exploitation would be similar to the TLA reference point definitions, with exceeding the first quartile of the reference period (2002-2012) being analogous to exceeding 30% red in the TLA and exceeding the median being analogous to exceeding 60% red
- Necessary to check abundance index if relative exploitation does not trip

# 4. Relative Exploitation (Mid-Atl)



# 4. Relative Exploitation (S Atl)



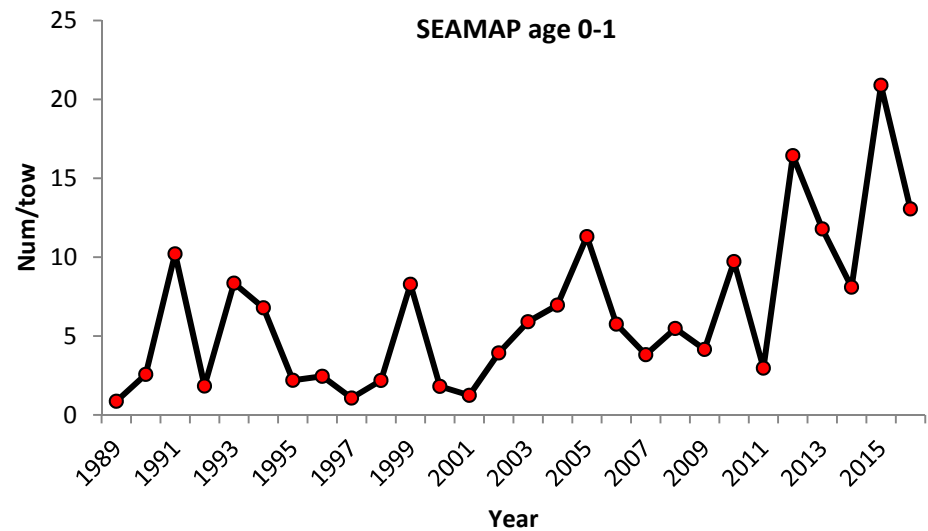
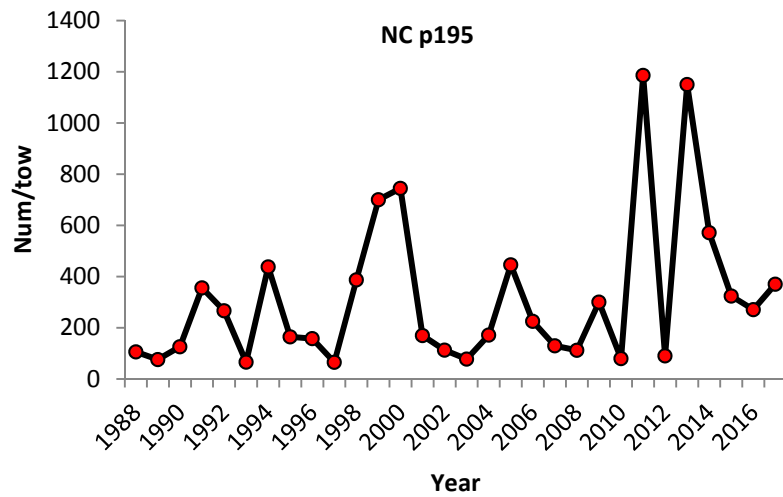
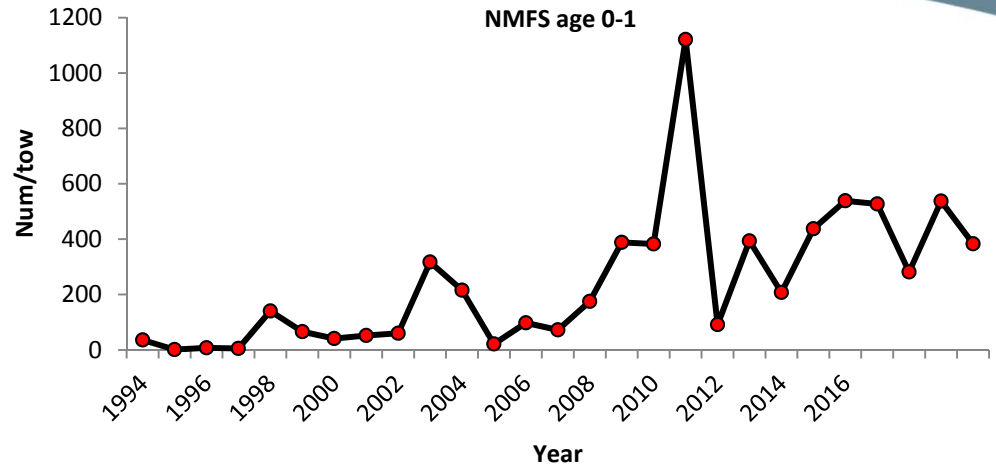
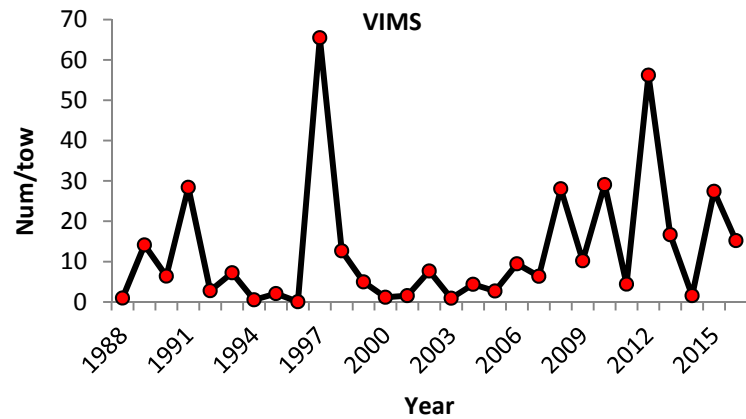


# Comparison



- Assuming both metrics need to trip for TLA options
- Status quo:
  - No concern triggered
- Coastwide with revised indices
  - No concern triggered
- Regional with revised indices
  - Mid-Atlantic: moderate concern triggered in 2016
  - South Atlantic: No concern triggered
- Relative exploitation
  - Mid-Atlantic:
    - Relative exploitation triggered significant concern in 2003-2005, 2010, 2015 and moderate concern in 2006-2009, 2012
    - Abundance triggered significant concern in 2016 and moderate concern in 2014
    - Only 2011 and 2013 would not have triggered concern
  - South Atlantic:
    - Relative exploitation triggered significant concern in 1993-2006 and moderate concern in 2007-2010

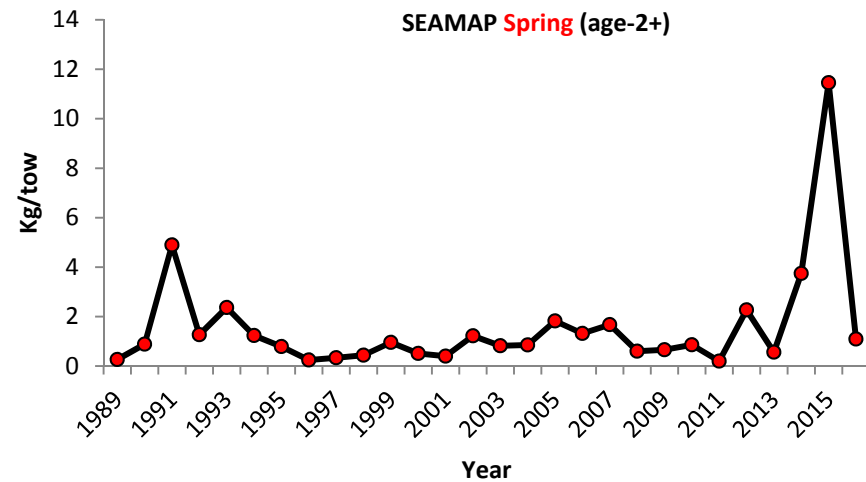
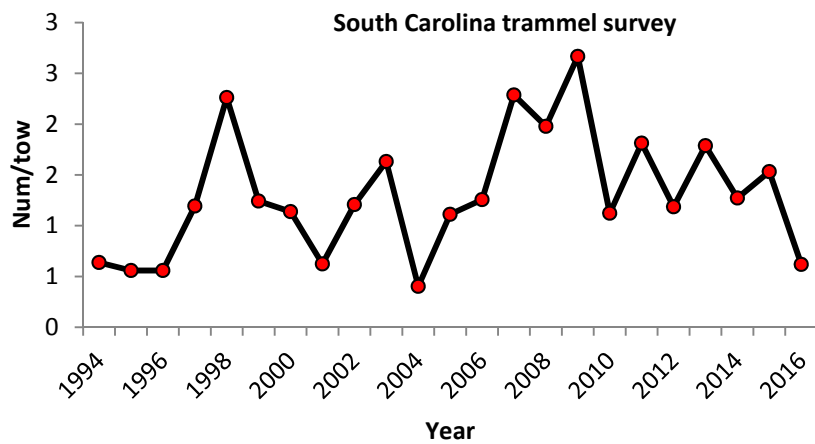
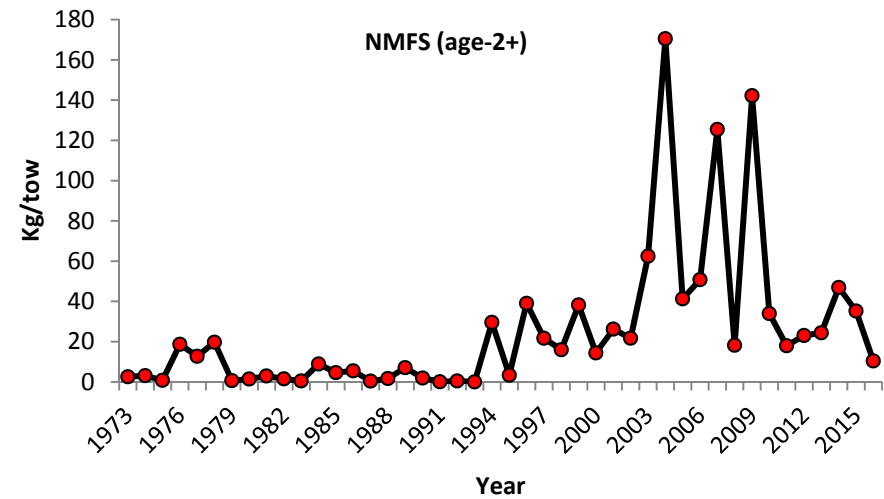
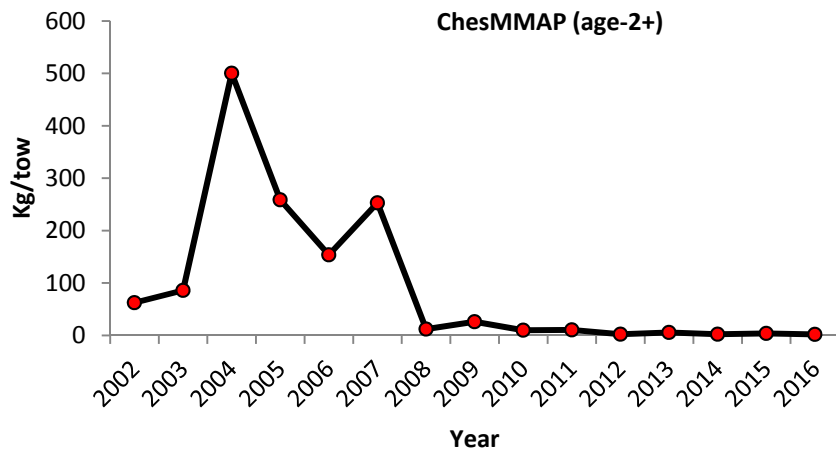
# Croaker Revised Indices - Juvenile



# Croaker Revised Indices - Adults



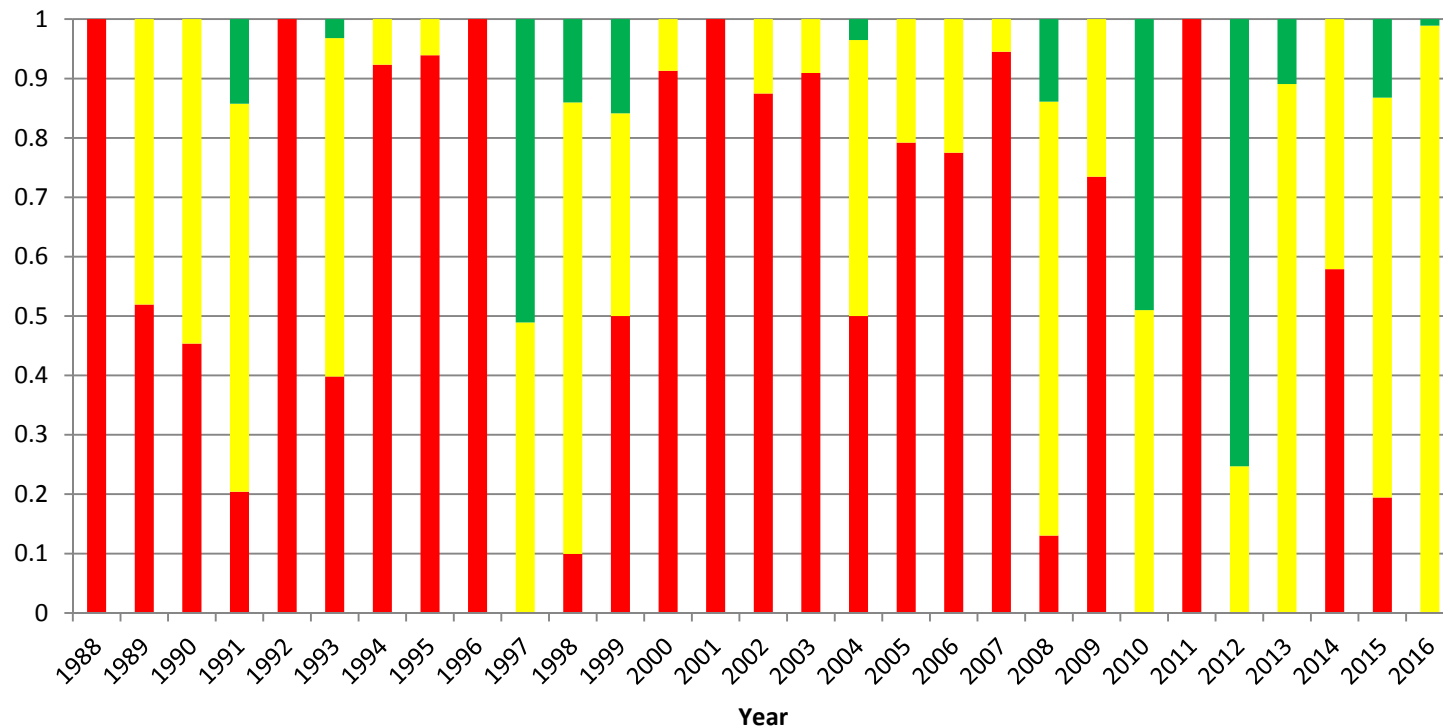
- Mid-Atlantic inshore, offshore and a South Atlantic inshore, offshore



# Croaker Juvenile TLA



Annual TLA for croaker from the recruitment composite index based on a 2002-2012 reference period

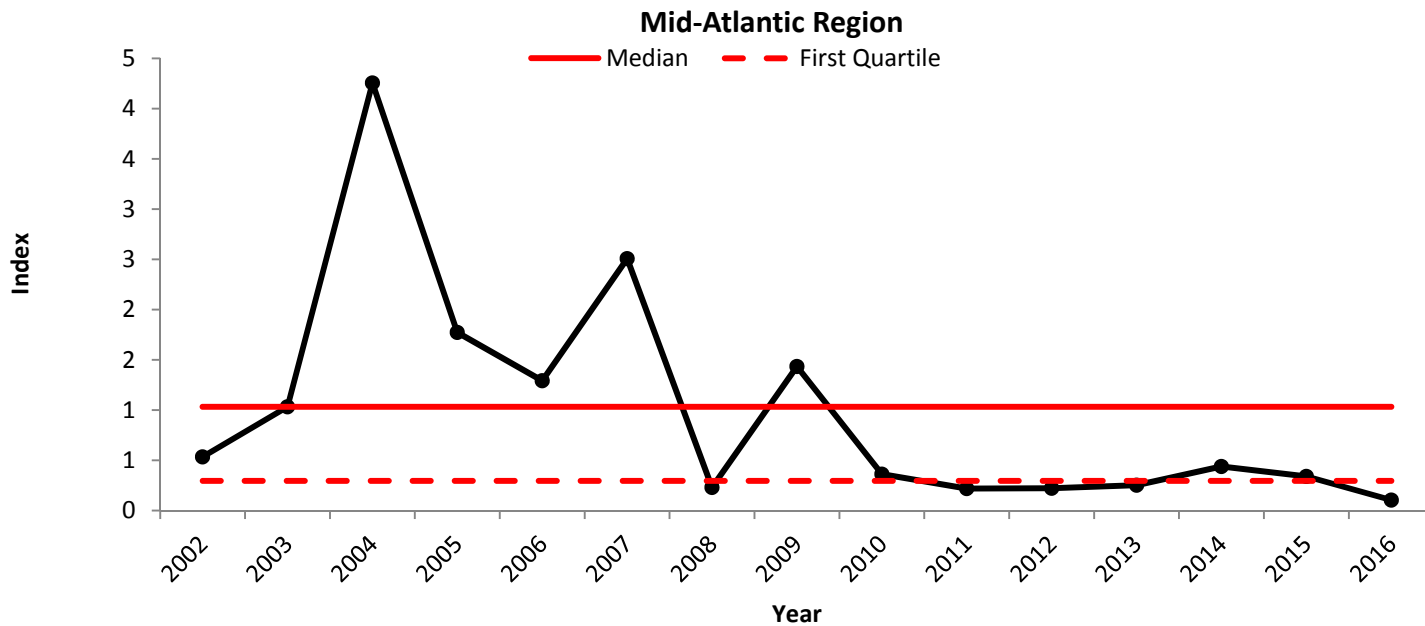
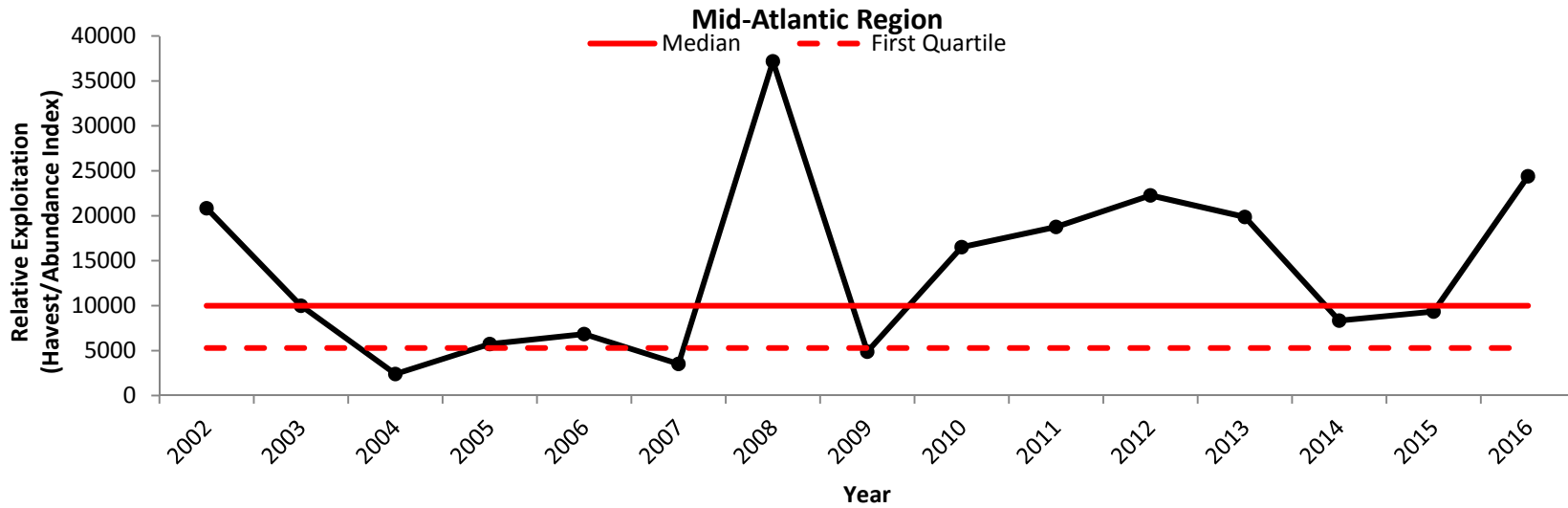


# 4. Relative Exploitation

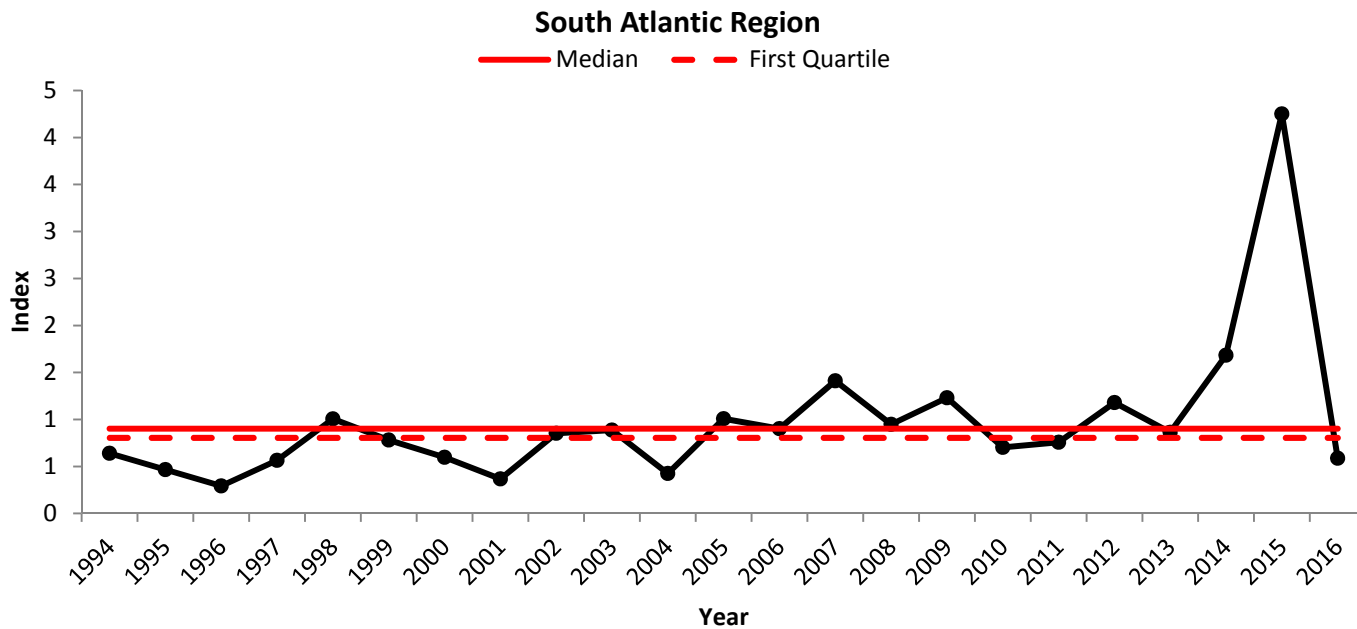
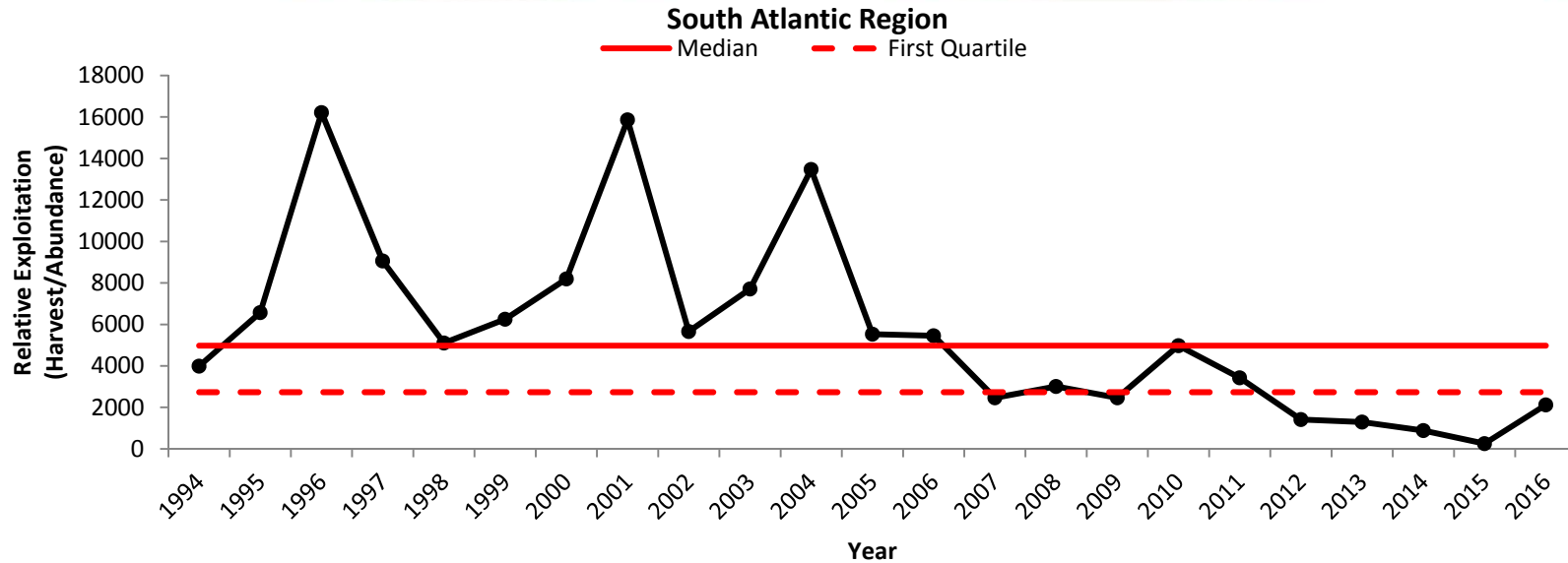


- Done regionally as the harvest/composite indices
- Management triggers for relative exploitation would be similar to the TLA reference point definitions, with exceeding the first quartile of the reference period (2002-2012) being analogous to exceeding 30% red in the TLA and exceeding the median being analogous to exceeding 60% red
- Necessary to check abundance index if relative exploitation does not trip

# 4. Relative Exploitation (Mid-Atl)



# 4. Relative Exploitation (S Atl)



# Comparison



- Assuming both metrics need to trip for TLA options
- Status quo:
  - No concern triggered since 1993 (moderate)
- Coastwide with revised indices
  - Moderate concern triggered 2014-2016
- Regional with revised indices
  - Mid-Atlantic: moderate concern triggered 2015-2016
  - South Atlantic: No concern triggered
- Relative exploitation
  - Mid-Atlantic:
    - Relative exploitation triggered significant concern in 2010-2014 and moderate concern in 2002-2008, 2015-2016
    - Only 2009 would not have triggered concern
  - South Atlantic:
    - Relative exploitation triggered significant concern in 1996-2007 and moderate concern in 1995, 2008, 2010-2012
    - Abundance triggered moderate concern in 2013
    - Only 2009, 2014-2016 would not have triggered concern