



Traffic Light Analysis for 2015 Management Trigger Exercise for Atlantic Croaker and Spot

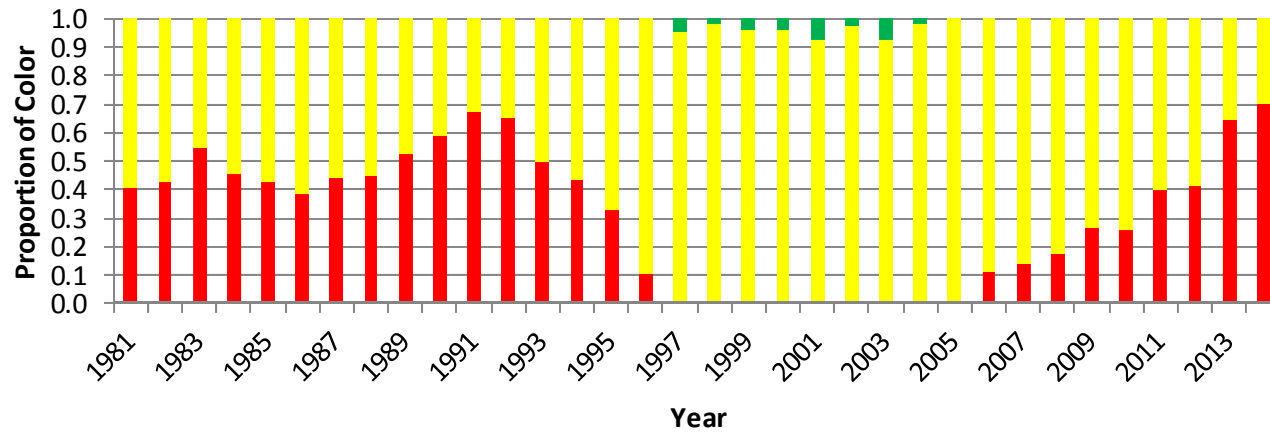
Presented to ASMFC South Atlantic
Board

August 6, 2013

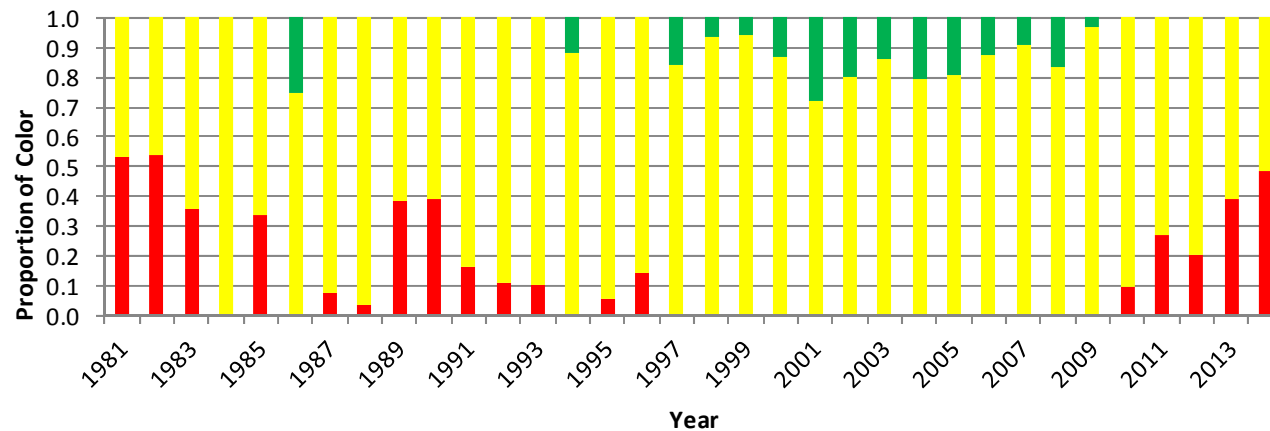
Atlantic Croaker: Harvest Index TLA



Annual TLA color proportions for Atlantic croaker commercial landings for the Atlantic coast of the US.



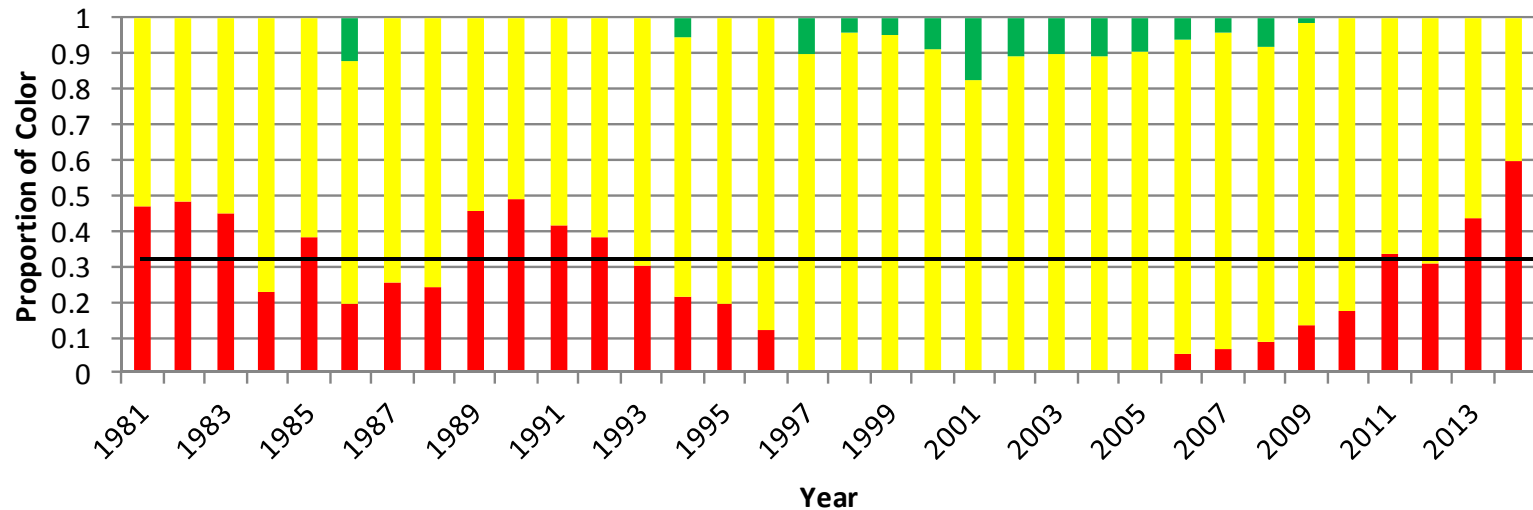
Annual TLA color proportions for Atlantic croaker from Atlantic coast (NJ-FL) recreational harvest of the U.S. based on a 1996-2008 reference period.



Atlantic Croaker: Harvest Composite TLA



Annual color proportions for harvest composite TLA of Atlantic Croaker recreational and commercial landings



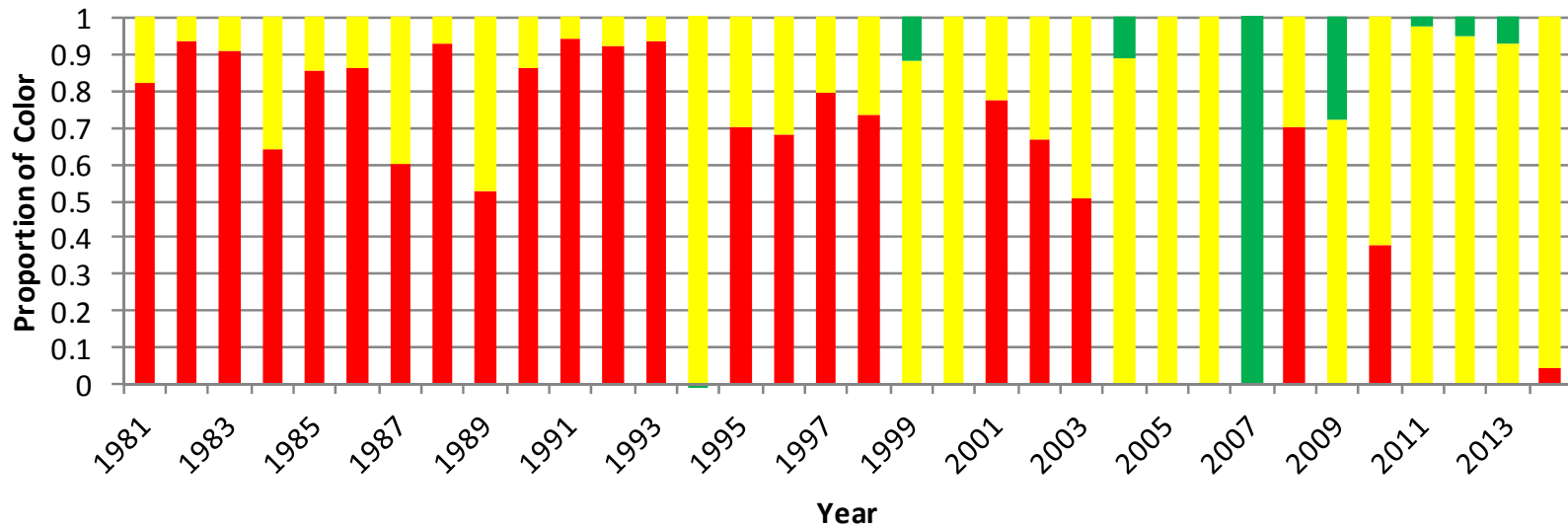
❖ The harvest composite index did trip in 2014 with a mean read proportion of 59.5%, which was above the 30% threshold

❖ This is the second year in a row the harvest composite has tripped since the TLA was adopted in 2013

Atlantic Croaker: Adult Abundance Characteristic Indices (FI)



Annual TLA color proportions for Atlantic croaker from NMFS ground-fish trawl survey based on 1996-2008 reference period.

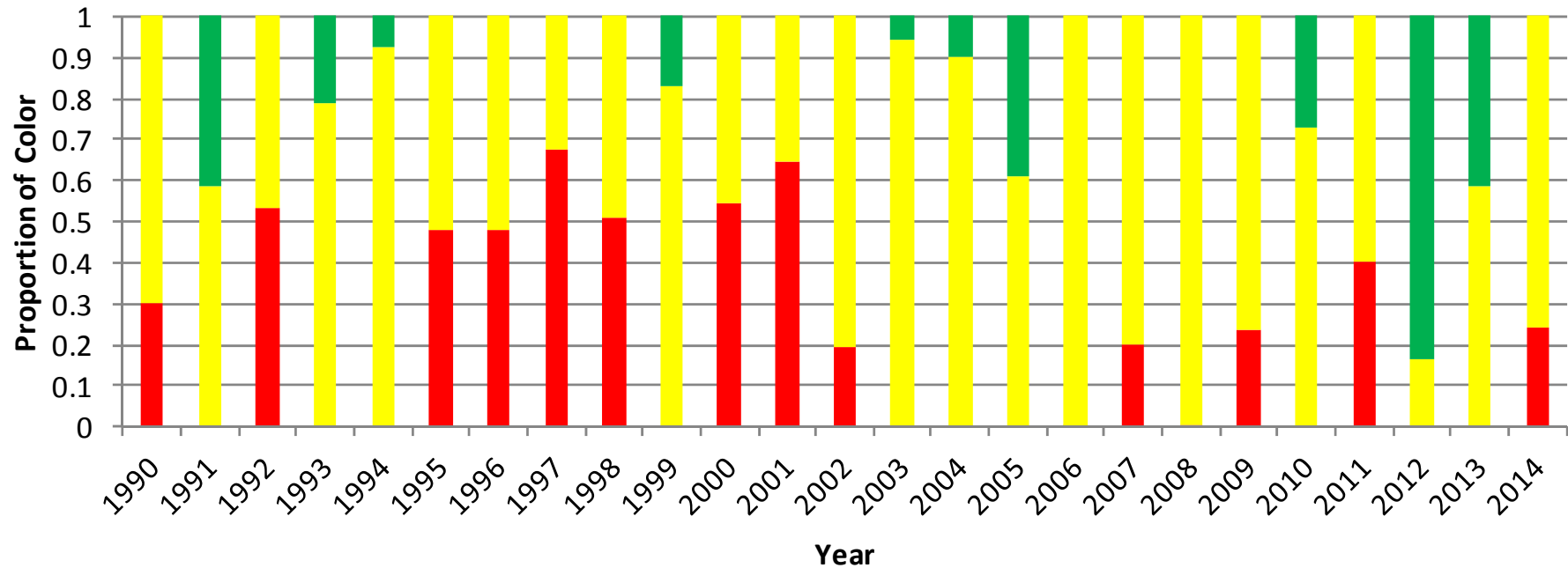


The NMFS index TLA trigger did not trip in 2014 given the high catch levels in 2012-2013 and the relatively low proportion of red in 2014.

Atlantic Croaker: Adult Abundance Characteristic Indices (FI)



Traffic Light Model for SEAMAP catch data by weight

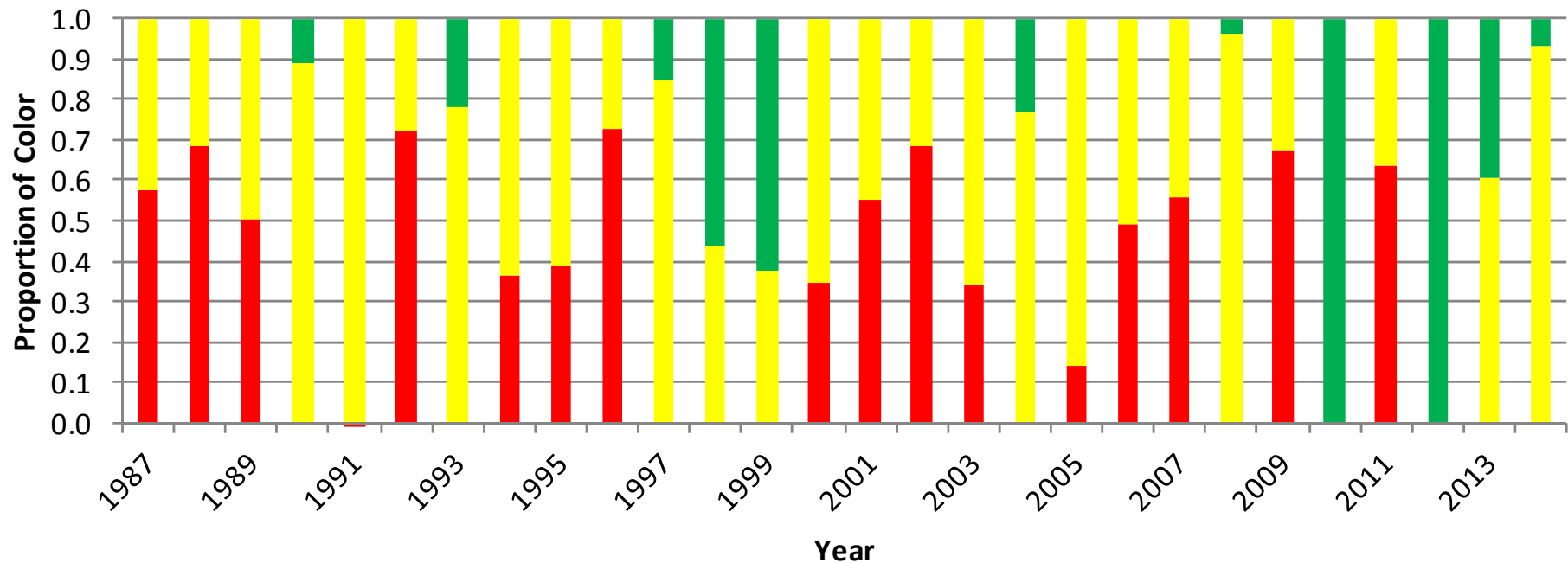


The TLA trigger for the SEAMAP survey did not trip in 2014.

Atlantic Croaker: Juvenile Abundance Characteristic Indices (FI)



NCDMF Program 195 FTLA color proportions for Atlantic croaker

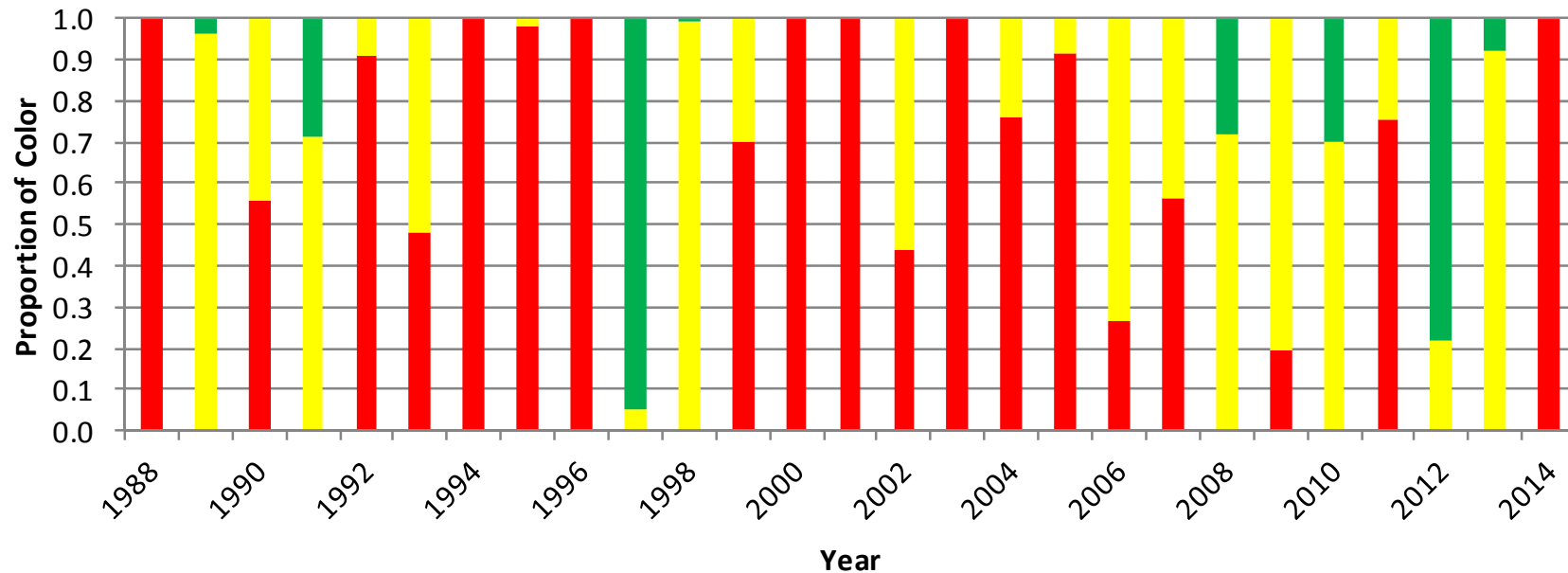


❖ While the TLA did indicate a declining trend in this index as well, it did not trigger in 2014 as catch levels have remained above the LTM.

Atlantic Croaker: Juvenile Abundance Characteristic Indices (FI)



Annual TLA color proportions for Atlantic croaker from VIMS spring trawl survey.

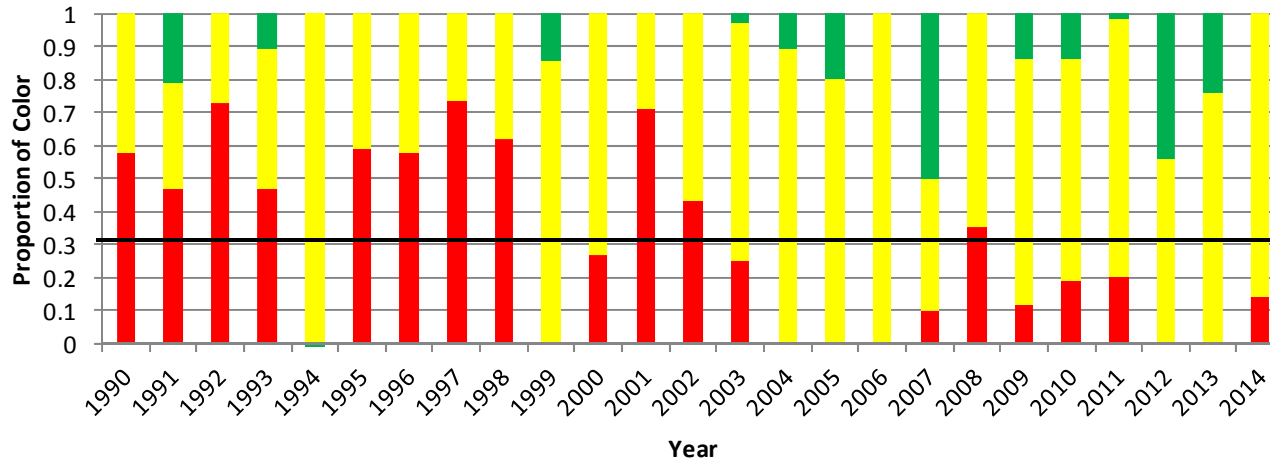


❖ The VIMS index did trigger in 2014 due to the elevated red proportion, despite there being no red in the TLA index in the two previous years.

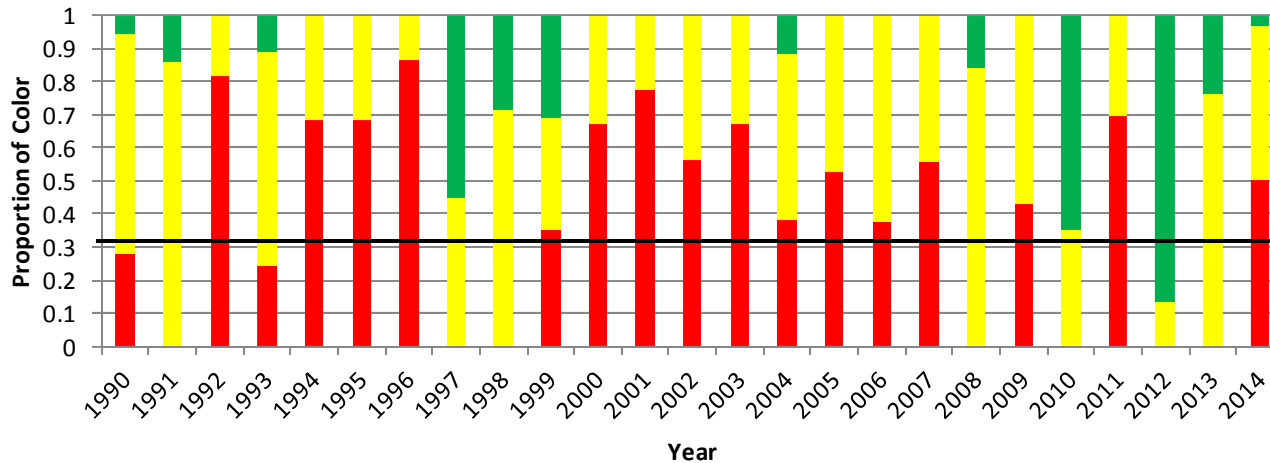
Atlantic Croaker: Abundance Composite Characteristic



Adult croaker TLA composite characteristic index (NMFS and SEAMAP surveys).



Juvenile croaker TLA composite characteristic index (NC 195 and VIMS surveys).



Atlantic Croaker: Recommendations

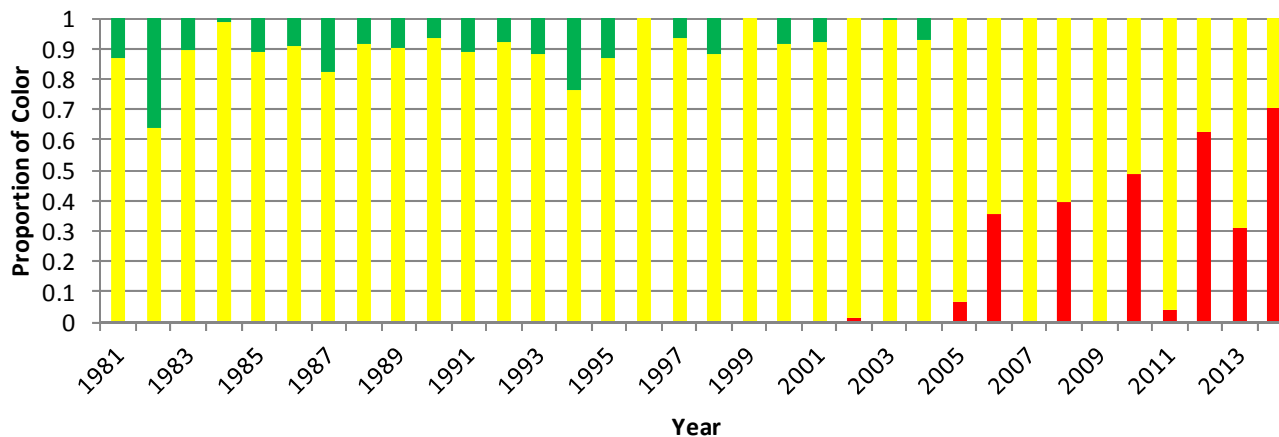


- Since both the Harvest and Adult Abundance trigger indexes did not trip in 2014, no management response is required. However, the declining trends in all of the indexes will bear further watching over the next few years.
- The stock assessment (which has just gotten underway) will hopefully provide additional information on these trends and establish some population parameters to further refine the use of the traffic light analysis for management responses.

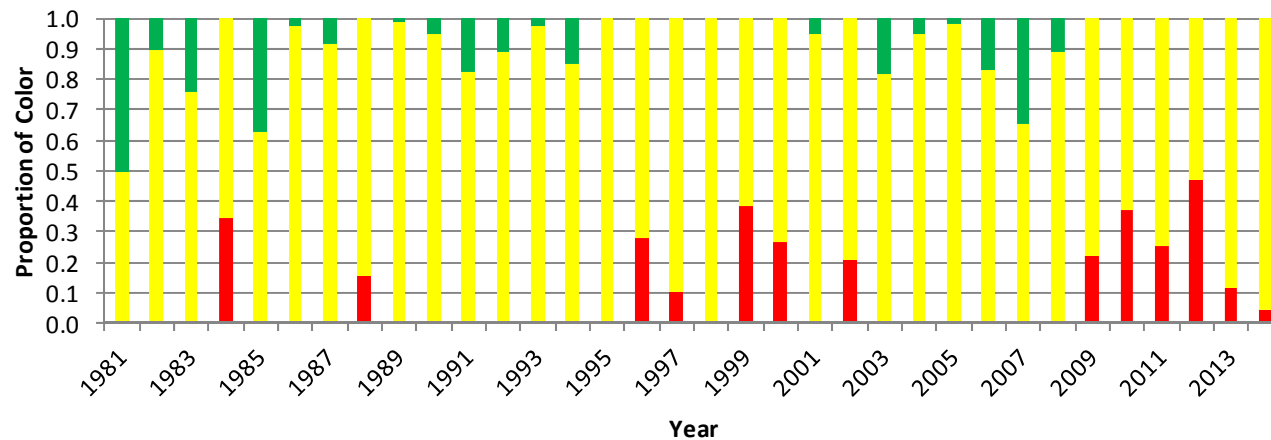
Spot: Harvest Index TLA



Annual FTLA color proportions using 1981-2012 reference time period for Spot from NMFS commercial landings for the Atlantic coast of the U.S.



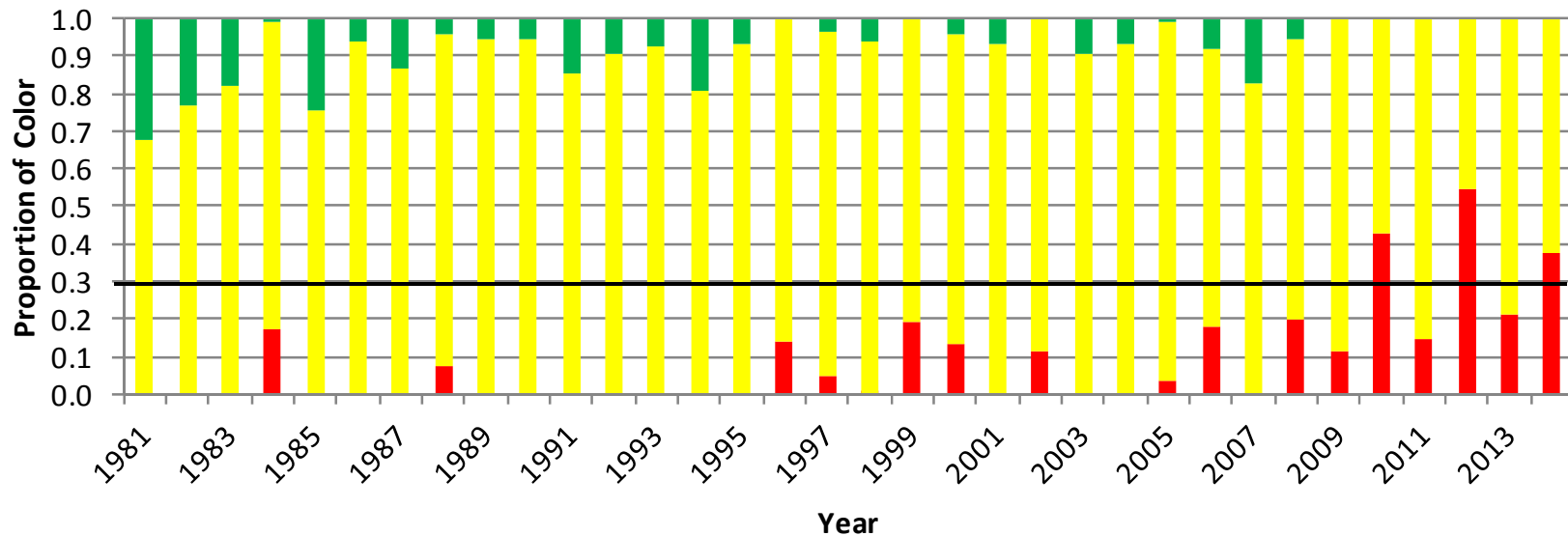
Annual TLA color proportions using 1989-2012 reference period for spot from recreational harvest in LBS on the Atlantic coast of the U.S.



Spot: Harvest TLA Composite



Annual TLA color proportions for composite commercial and recreational harvest of spot for the Atlantic coast of the United States using a 1989-2012 reference period.

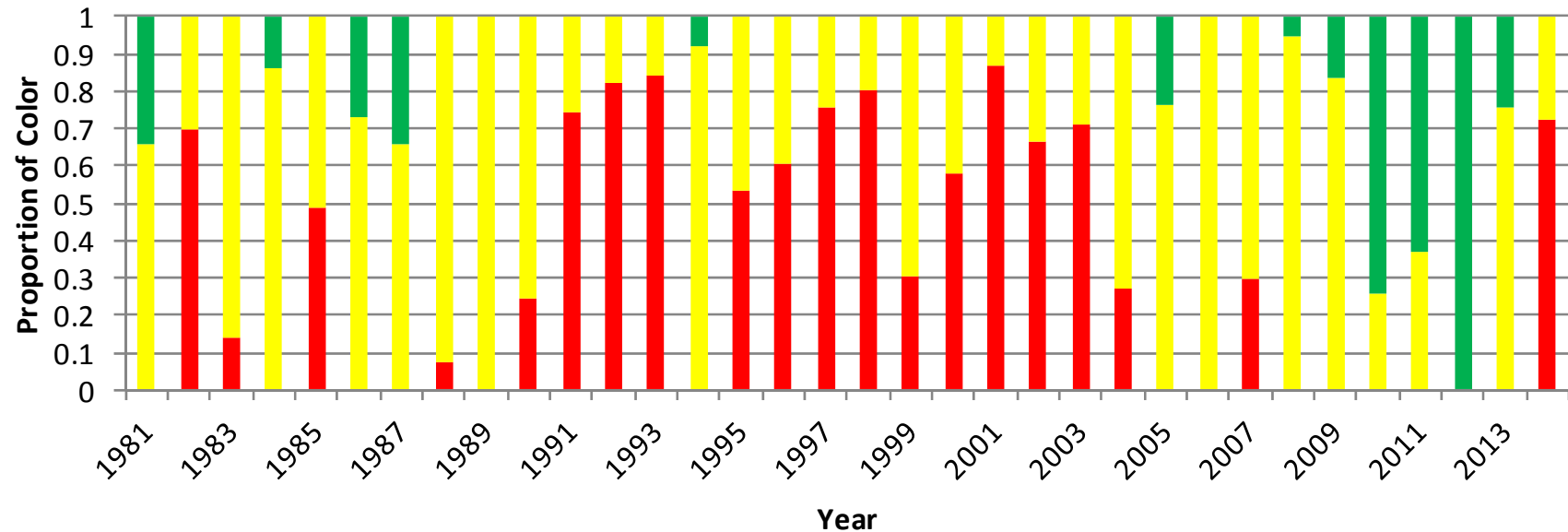


❖ The index did not trigger in 2014, but it did come very close with a mean red proportion for 2013-2014 of 29.4%, and exceeded the 30% threshold in 2014. This will bear further watching to see if the decline continues in 2015.

Spot: Abundance Characteristic NMFS Index (FI)



Annual FTLA color proportions for spot from NMFS fall groundfish survey using 1989-2012 reference time period.

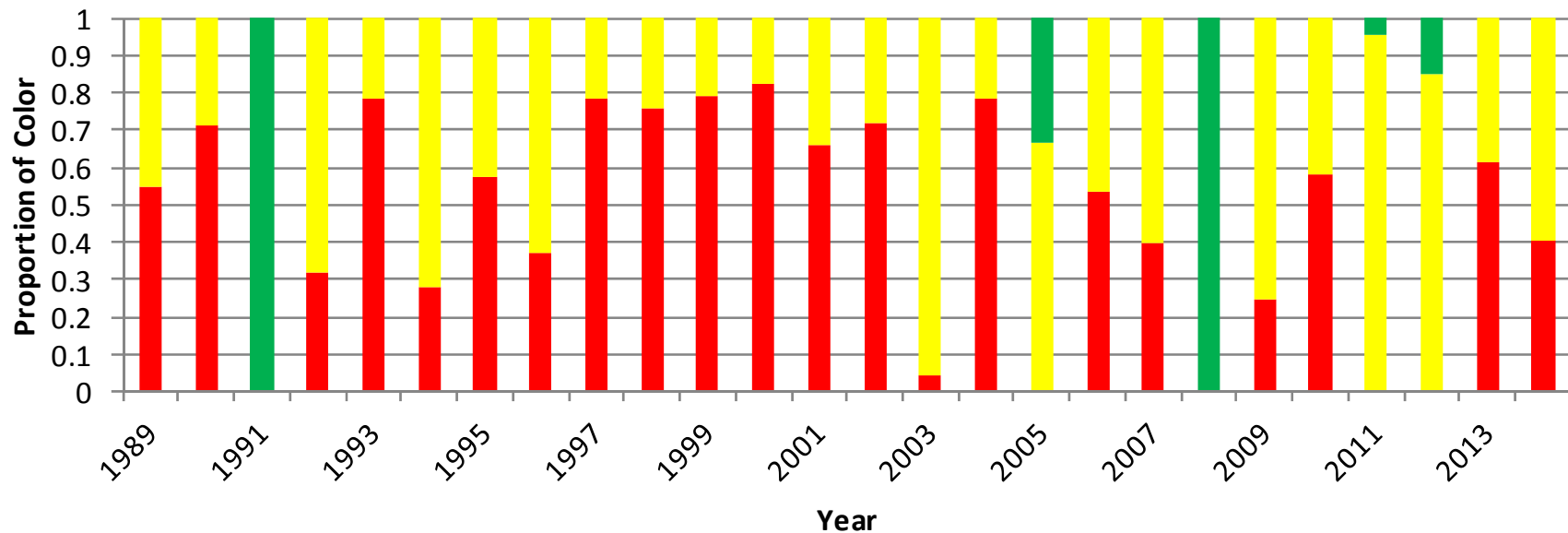


❖ The TLA trigger did trip in 2014 at the 60% threshold.

Spot: Abundance Characteristic SEAMAP Survey (FI)



Annual FTLA color proportions for spot from SEAMAP survey using 1989-2012 reference time period.

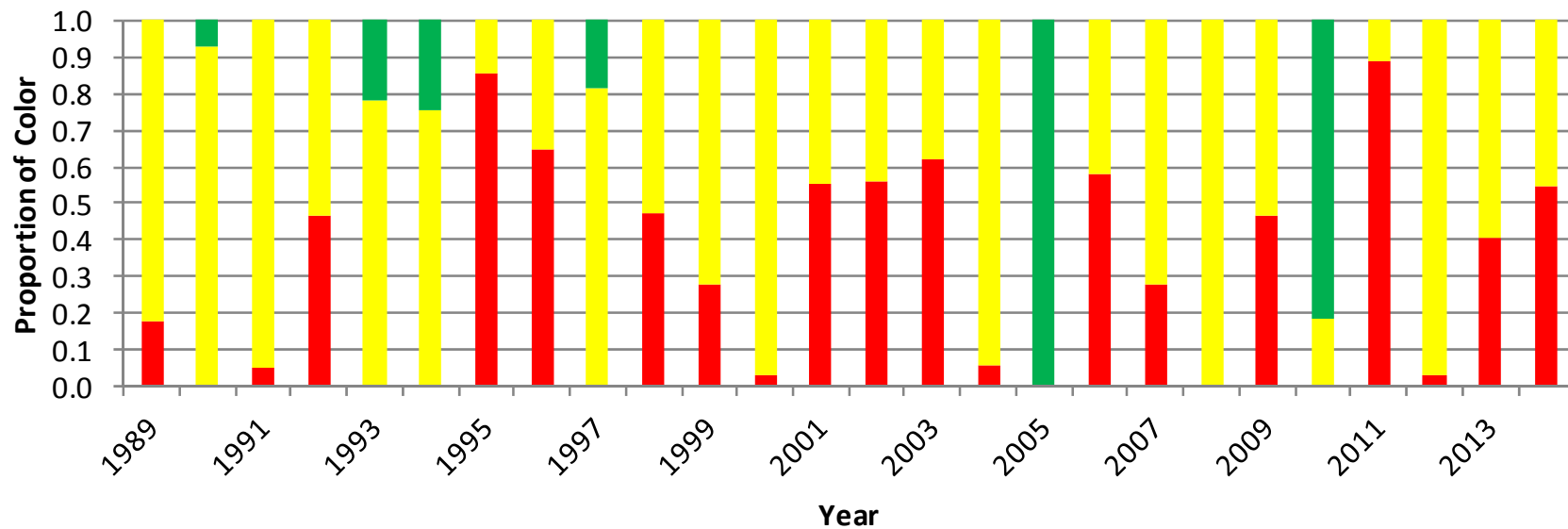


❖ The TLA trigger did trip in 2014 at the 30% threshold.

Spot: Abundance Characteristic: MD Survey (FI)



Annual TLA color proportions for the Maryland seine survey juvenile index using 1990-2012 reference period.

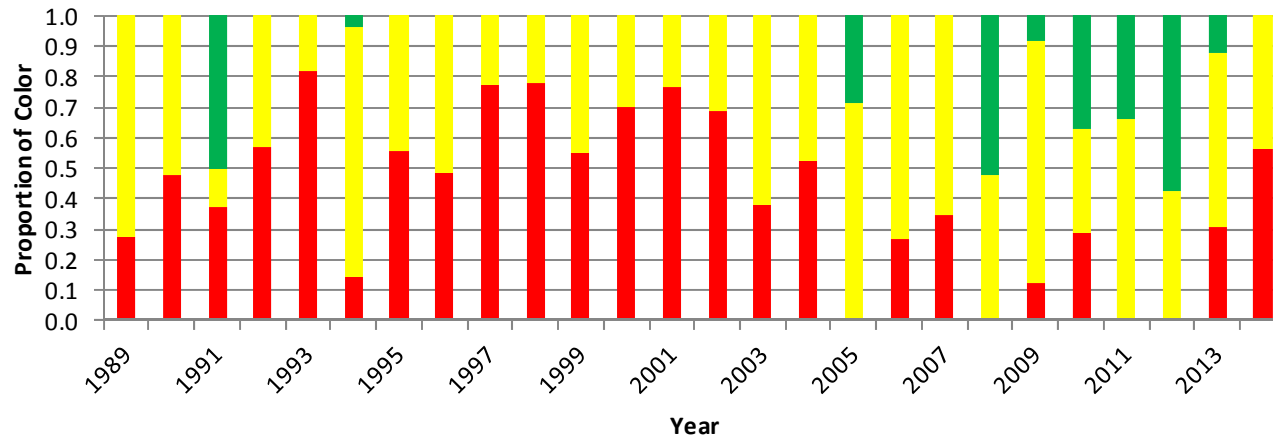


❖ The TLA trigger did trip in 2014 at the 30% threshold.

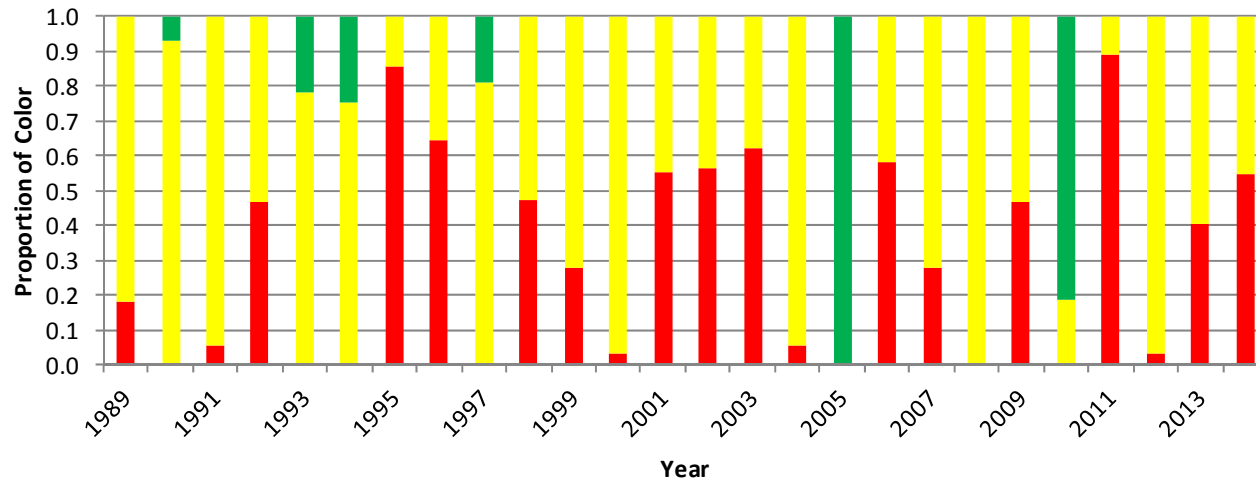
Spot: Abundance Composite Characteristics



Annual TLA color proportions for composite index of NMFS and SEAMAP surveys for Spot using a 1989-2012 reference period.



Maryland seine survey juvenile index using 1990-2012 reference period.



Spot: Recommendations



- The TLA composite indexes did not trip for the harvest indices but did trip for the fishery independent indices. The recreational harvest index was the only one that did not exceed 30%.
- However, given that all the composite indexes are showing increasing red proportions there is cause for concern with spot.
- Given that the benchmark stock assessment for spot has just gotten underway, the PRT would recommend that the Board wait until the assessment is completed and we have some benchmark stock parameters on which to base management decisions before making management regulations to the states.



Atlantic Croaker Fishery Management Plan Review

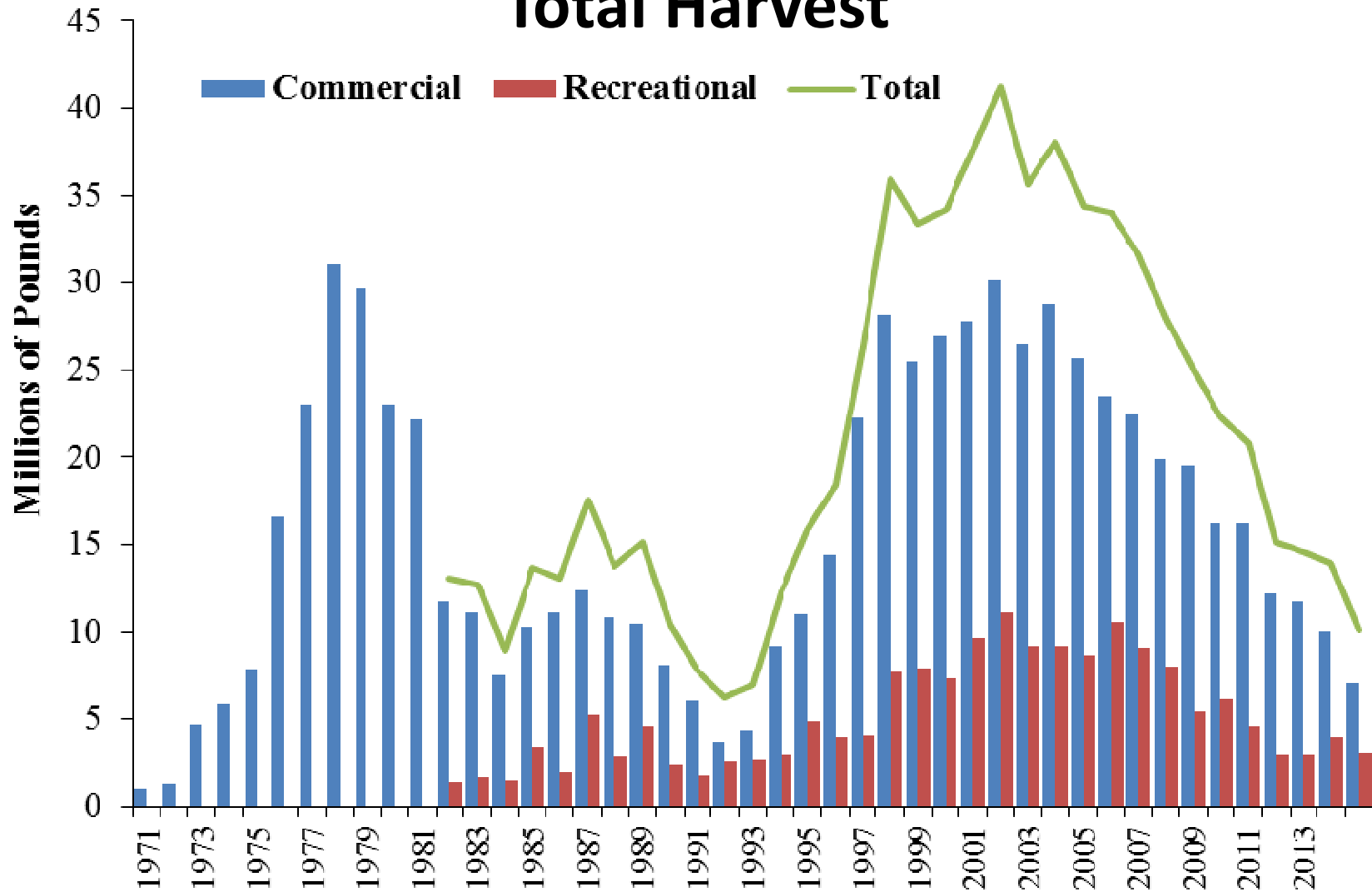
South Atlantic State/Federal Management Board

August 6, 2015

Status of the Fishery



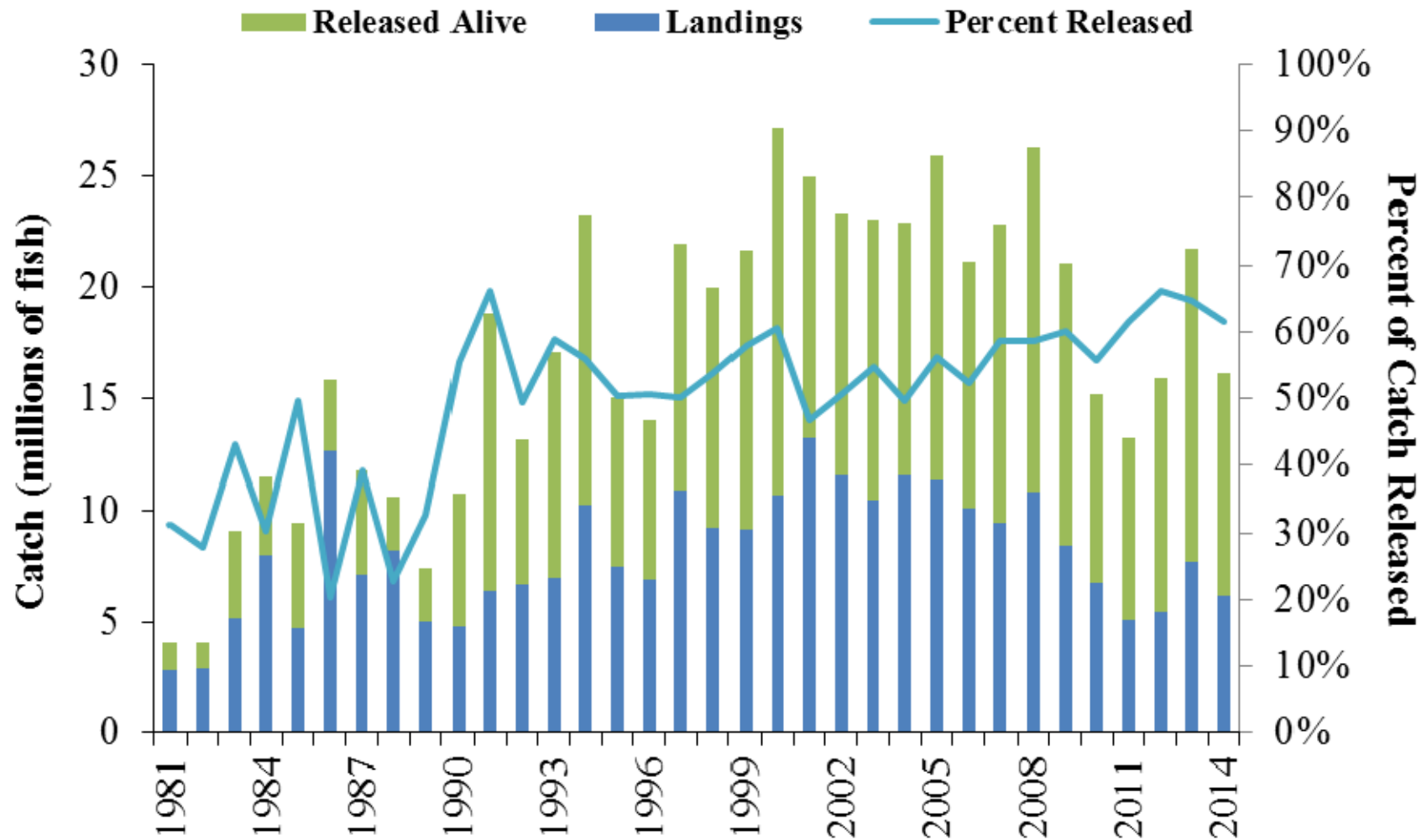
Total Harvest



Status of the Fishery



Recreational Catch



Status of Stock



- 2010 Stock Assessment
 - Not experiencing overfishing
 - Model estimates too uncertain to determine overfished stock status
- TLA shows declining harvest and abundance indices
- 2016 Stock Assessment

State Compliance and *De Minimis*



- PRT finds all states have fulfilled the requirements of Amendment 1
- *De Minimis*:
 - Criteria: 3 year average, either fishery, 1%
 - Requests: DE (com), SC (com), GA (com & rec), FL (com)
 - All qualify for *de minimis*
 - Does not exempt states from any compliance requirements

Recommendations



- **Management**

- The PRT recommends the Board approves the 2014 Atlantic Croaker FMP Review, state compliance reports, and *de minimis* status for DE, SC, GA and FL
- Review stock status after 2016 assessment

- **Research**

- Characterize bycatch in shrimp trawl fishery
- Increase species sampling in its southern range
- Determine migratory patterns and mixing rates through cooperative tagging studies



Red Drum Fishery Management Plan Review

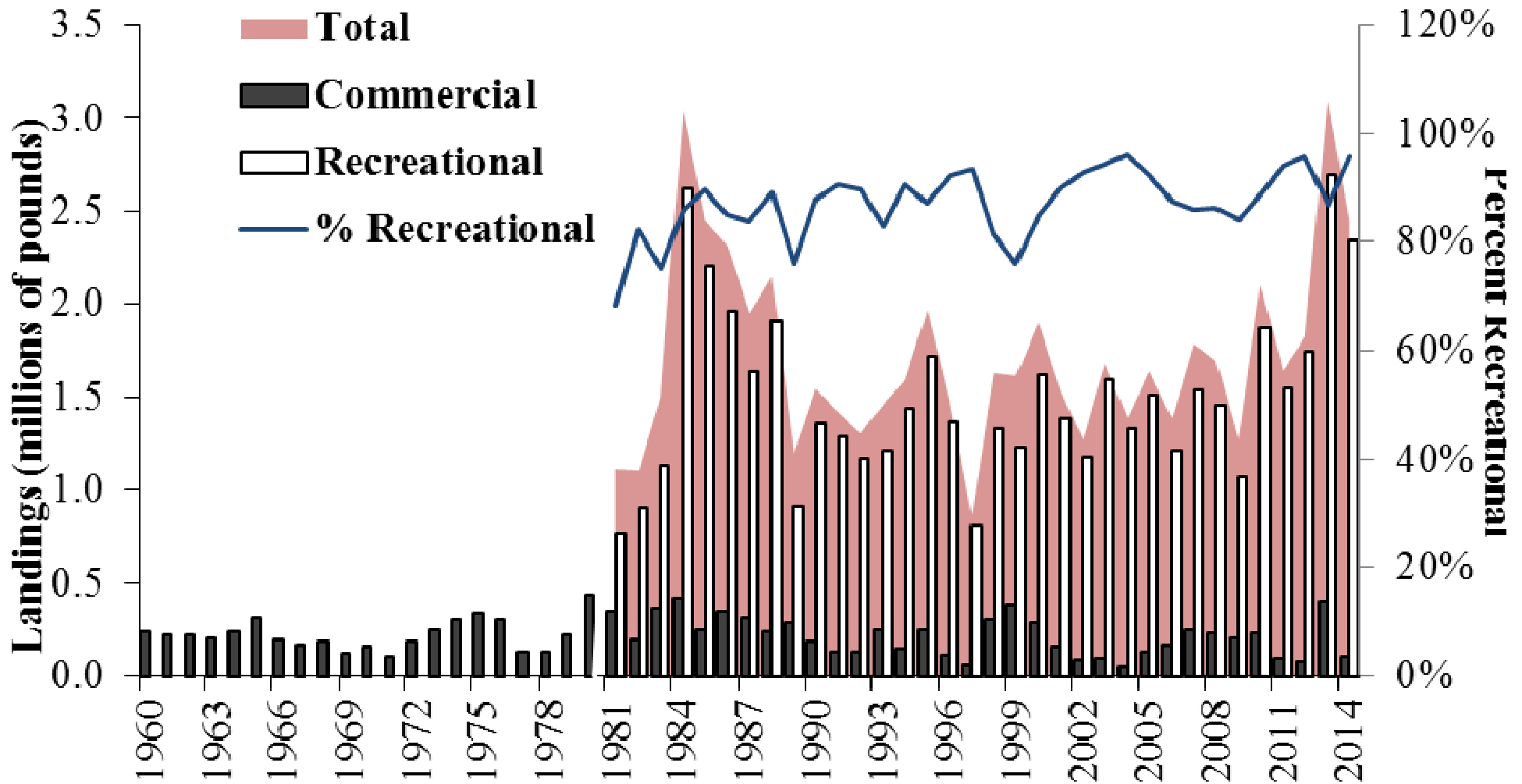
South Atlantic State/Federal Management Board

August 6, 2015

Status of the Fishery



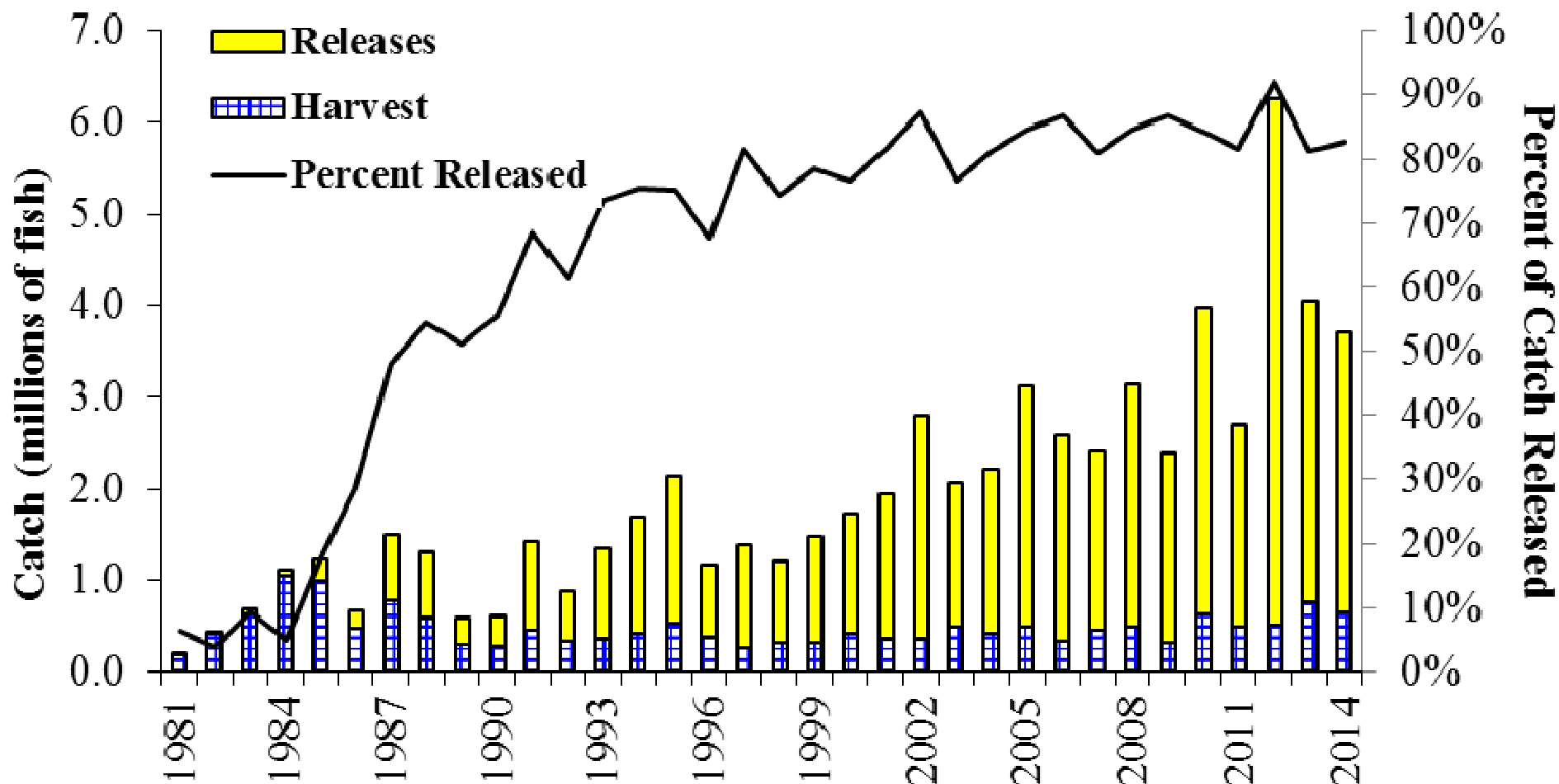
Total Landings



Status of the Fishery



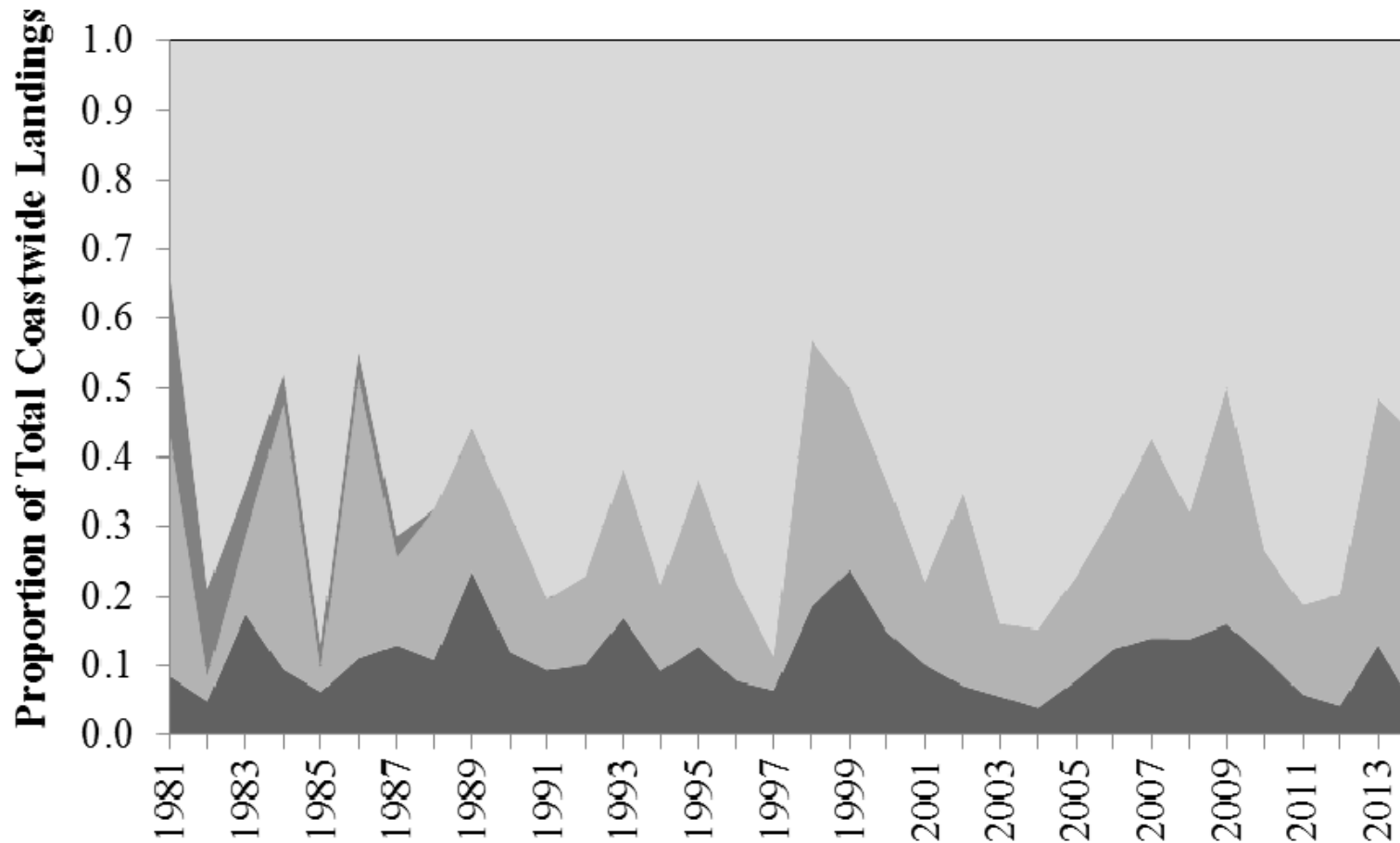
Recreational Catch



Mid v. South Atlantic



- Mid-Atlantic Commercial
- Mid-Atlantic Recreational
- South Atlantic Commercial
- South Atlantic Recreational



Status of Stock



- 2009 Stock Assessment
 - Overfishing is not occurring
 - Data limitations, particularly adults
- 2015 Stock Assessment underway

Status of Management



State	Recreational	Commercial
NJ	18" - 27", 1 fish	18" - 27", 1 fish
DE	20" - 27", 5 fish	20" - 27", 5 fish
MD	18" - 27", 1 fish	18" - 25", 5 fish
PRFC	18" - 25", 5 fish	18" - 25", 5 fish
VA	18" - 26", 3 fish	18" - 26", 3 fish
NC	18" - 27", 1 fish	18" - 27"; 250,000 lb harvest cap
SC	15" - 23", 3 fish.	Gamefish Only
GA	14" - 23", 5 fish	Gamefish Only
FL	18" - 27", N. Region- 2 fish; S. Region- 1 fish	Sale of native fish prohibited

Amendment 2:

- 30% sSPR Threshold, 40% Target
- Max size limit 27"

State Compliance and *De Minimis*



- PRT finds all states have fulfilled the requirements of Amendment 2
- *De Minimis*:
 - Criteria: combined, 2 year average
 - Requests: NJ, DE
 - All qualify for *de minimis*
 - Does not exempt states from any compliance requirements

Recommendations



- **Management**

- The PRT recommends the Board approves the 2014 Red Drum FMP Review, state compliance reports, and *de minimis* status for NJ and DE

- **Research**

- Improve sampling to determine the size and age structure of regulatory discards of live red drum
- Explore methods to effectively sample the adult population



Black Drum Fishery Management Plan Review

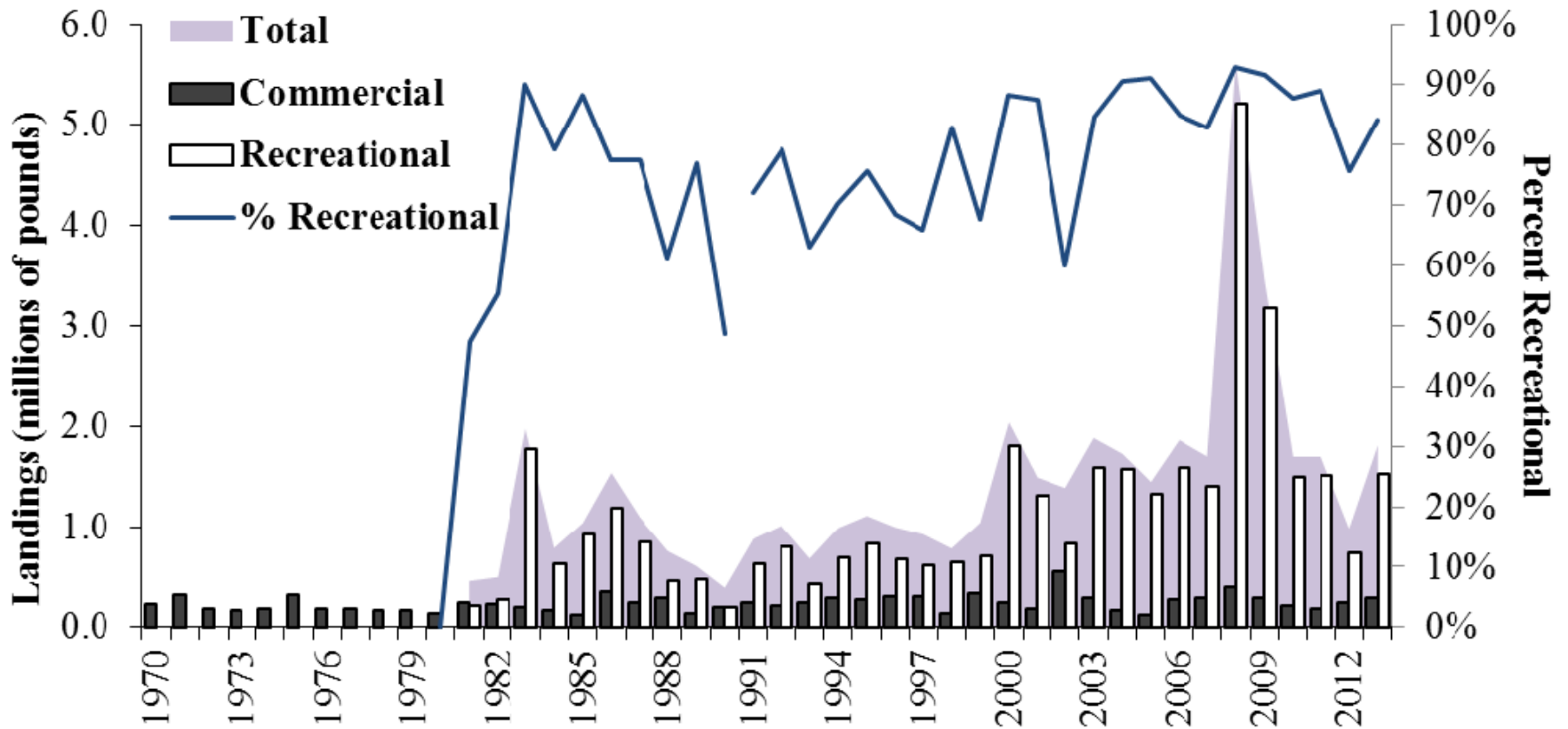
South Atlantic State/Federal Fisheries Management
Board

August 6, 2015

Status of the Fishery



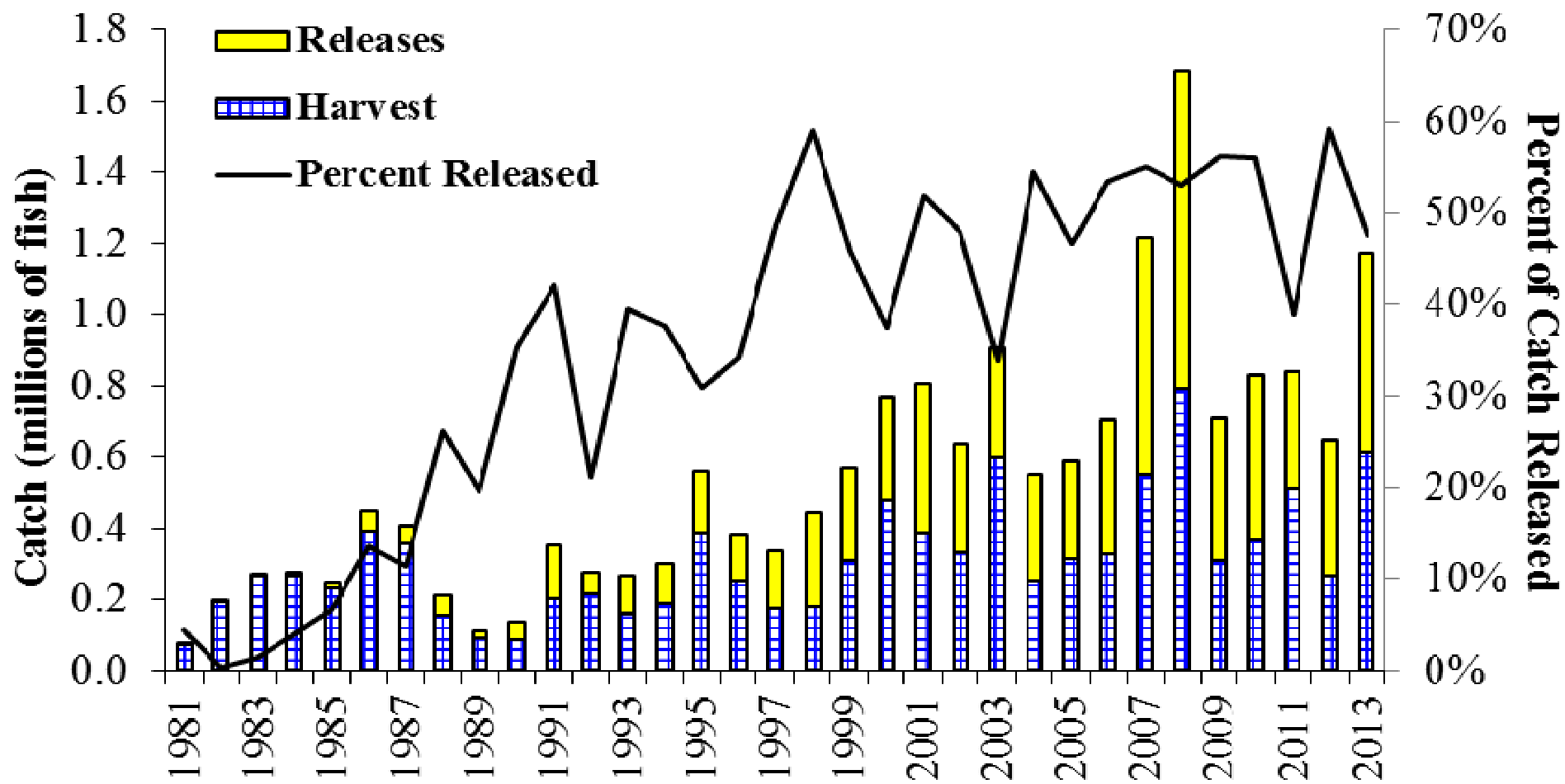
Total Landings



Status of the Fishery



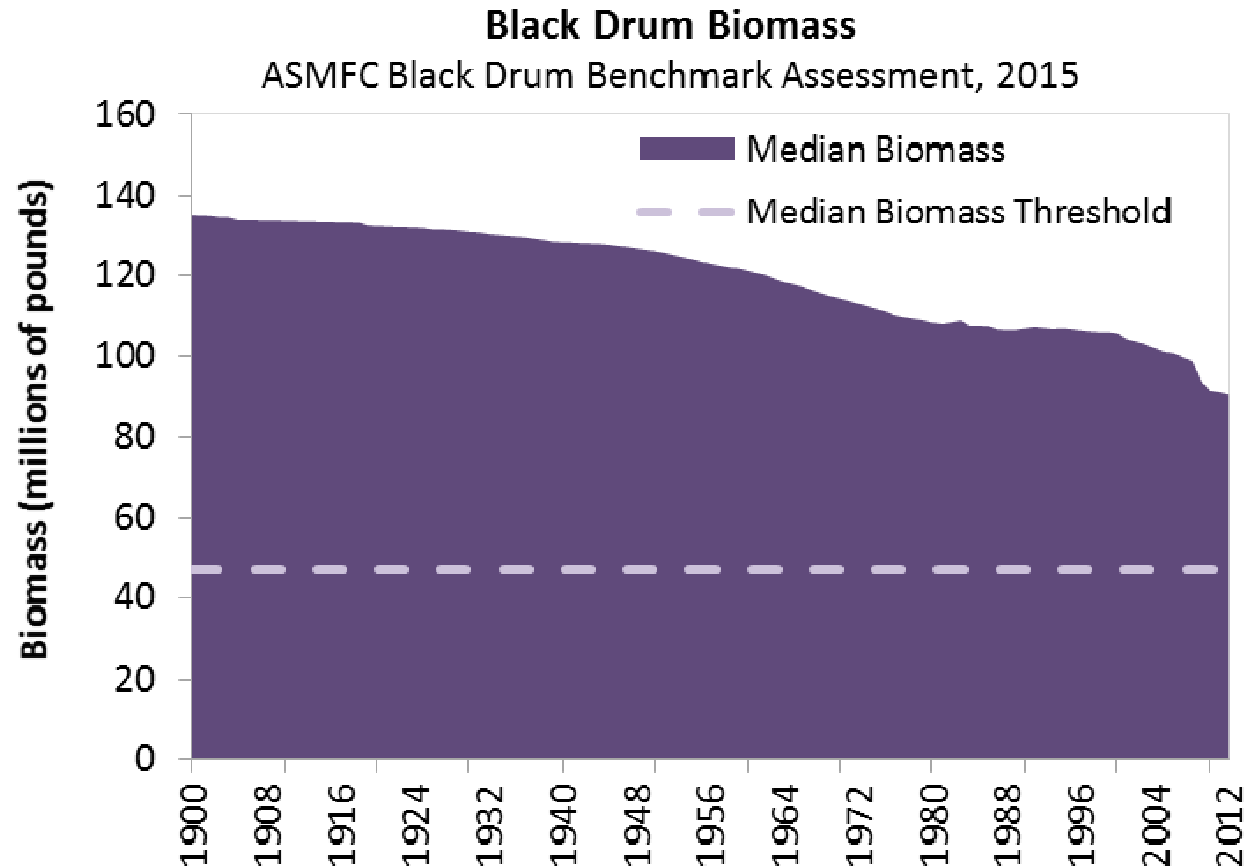
Recreational Catch



Status of Stock



- 2015 Stock Assessment
 - Not overfished; Not experiencing overfishing
 - Median biomass declining but above that needed to produce MSY



Status of Management



State	Recreational		Commercial
	Size limit	Bag limit	Size limit
NJ	16" min	3/person/day	16" min
DE	16" min	3/person/day	16" min
MD	16" min	1/person/day 6/vessel (Bay)	16" min
VA	16" min	1/person/day	16" min
NC	14" min 25" max	10/person/day	14" min 25" max
SC	14" min 27" max	5/person/day	14" min 27" max
GA	14" min	15/person/day	14" min
FL	14" min 24" max	5/person/day	14" min 24" max

2013 FMP

- Possession limit
- 12" min size by 1/1/14
- 14" min size by 1/1/16

State Compliance & *De Minimis*



- PRT finds all states have fulfilled the requirements of Interstate Fishery Management Plan for Black Drum
- *De Minimis*:
 - Criteria: combined landings, 3 year average, 1%
 - Requests: none

Recommendations



- **Management**

- The PRT recommends the Board approves the 2014 Black Drum FMP Review and state compliance reports
- Review impact of increased min size

- **Research**

- Sample size composition of fish discarded in recreational fisheries
- Collect age samples
- Estimate selectivity-at-age for commercial fisheries



Terms of Reference for the Atlantic Croaker and Spot Benchmark Stock Assessments

August 6, 2015

Terms of Reference



- Terms of Reference to guide stock assessment and peer review
- Developed by the Atlantic Croaker Technical Committee, Spot Plan Review Team, and Atlantic Croaker and Spot Joint Stock Assessment Subcommittee
- Same TORs for both species

TOR #1: Stock Assessment



1. Characterize uncertainty of fishery-dependent and fishery-independent data used in the assessment.

TOR #2: Stock Assessment



2. Review estimates and PSEs of MRIP recreational fishing estimates. Request participation of MRIP staff in the data workshop process to compare historical and current data collection and estimation procedures and to describe data caveats that may affect the assessment.

TOR #3: Stock Assessment



3. Develop estimates of Atlantic croaker discards in the South Atlantic shrimp trawl fishery. Develop estimates of bycatch and discards in other fisheries where possible. Characterize uncertainty of all discard and bycatch estimates.

TOR #4: Stock Assessment



4. Develop models used to estimate population parameters (e.g., F , biomass, abundance) and biological reference points, and analyze model performance.

TOR #5: Stock Assessment



5. State assumptions made for all models and explain the likely effects of assumption violations on synthesis of input data and model outputs.

TOR #6: Stock Assessment



6. Characterize uncertainty of model estimates and biological or empirical reference points.

TOR #7: Stock Assessment



7. Perform retrospective analyses, assess magnitude and direction of retrospective patterns detected, and discuss implications of any observed retrospective pattern for uncertainty in population parameters (e.g., F , SSB), reference points, and/or management measures.

TOR #8: Stock Assessment



8. Recommend stock status as related to reference points (if available).

TOR #9: Stock Assessment



9. Other potential scientific issues:

- Compare trends in population parameters and reference points with current and proposed modeling approaches, including recent results of the Traffic Light Approach. If outcomes differ, discuss potential causes of observed discrepancies.
- Compare reference points derived in this assessment with what is known about the general life history of the exploited stock. Explain any inconsistencies.

TOR #10: Stock Assessment



10. If a minority report has been filed, explain majority reasoning against adopting approach suggested in that report. The minority report should explain reasoning against adopting approach suggested by the majority.

TOR #11: Stock Assessment



11. Develop detailed short and long-term prioritized lists of recommendations for future research, data collection, and assessment methodology. Highlight improvements to be made by next benchmark review.

TOR #12: Stock Assessment



12. Recommend timing of next benchmark assessment and intermediate updates, if necessary relative to biology and current management of the species.