

# **Spot and Croaker Traffic Light Analysis & Draft Management Framework**

South Atlantic State/Federal Management  
Board

February 6, 2014





## Purpose

- Concern over the current annual trigger exercises for Spot and Atlantic Croaker
- Consideration of Traffic Light Analysis by Atlantic Croaker TC & Spot PRT
- Follow up from August 2013 Board Meeting



# Traffic Light Analysis Advantages

- Analysis model fits well with both limited & extensive data sets for setting reference points.
- Color scheme is easy to explain to both fisheries professionals & the non-scientific community.
- Setting reference time frames over multiple generations can cover periods of population fluctuations taking into account long term increases & decreases.



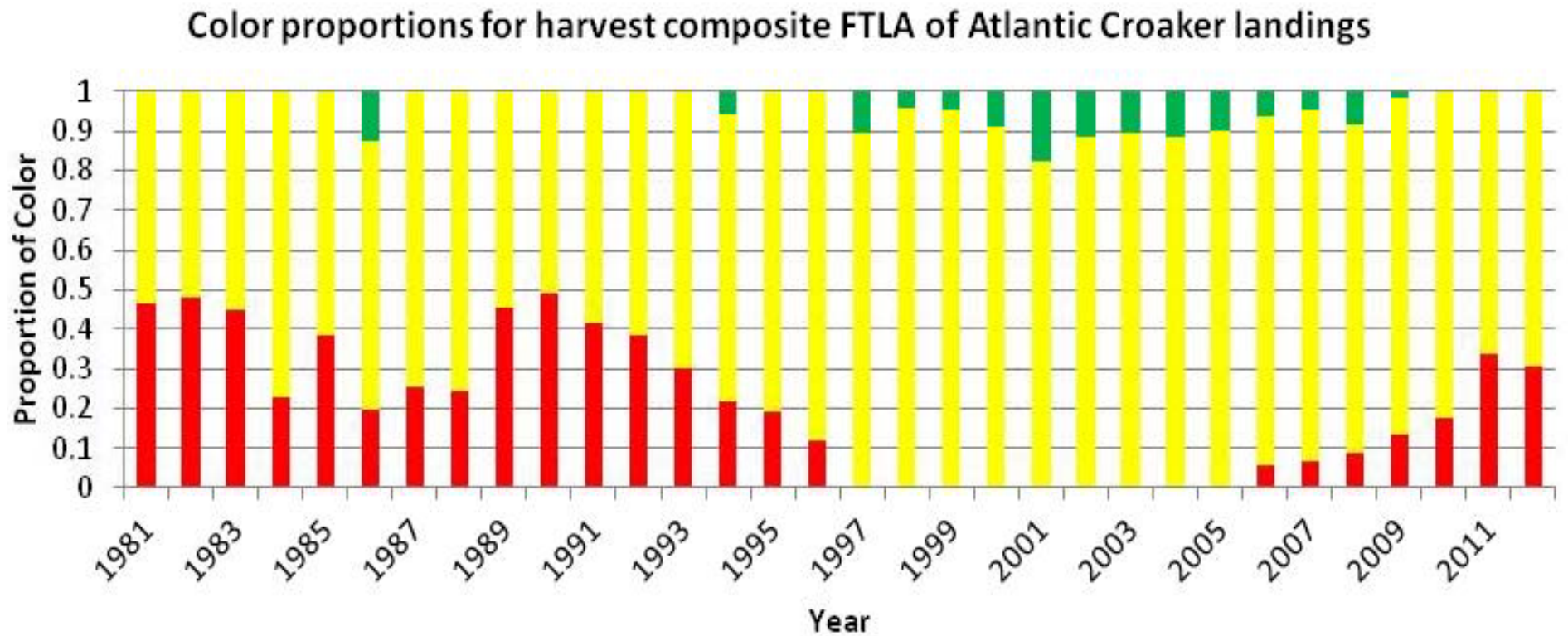
# Traffic Light Analysis (TLA) Update

## Atlantic Croaker

- Commercial & recreational harvest TLA show earlier indications of declining harvest rates versus the 70% trigger.
- TLA show signs of decline in landings 3-4 years before the 70% trigger.
- TLA using FI indices for both adults & juveniles were more variable than harvest trends, but overall patterns of declines was still more sensitive than the 70% trigger

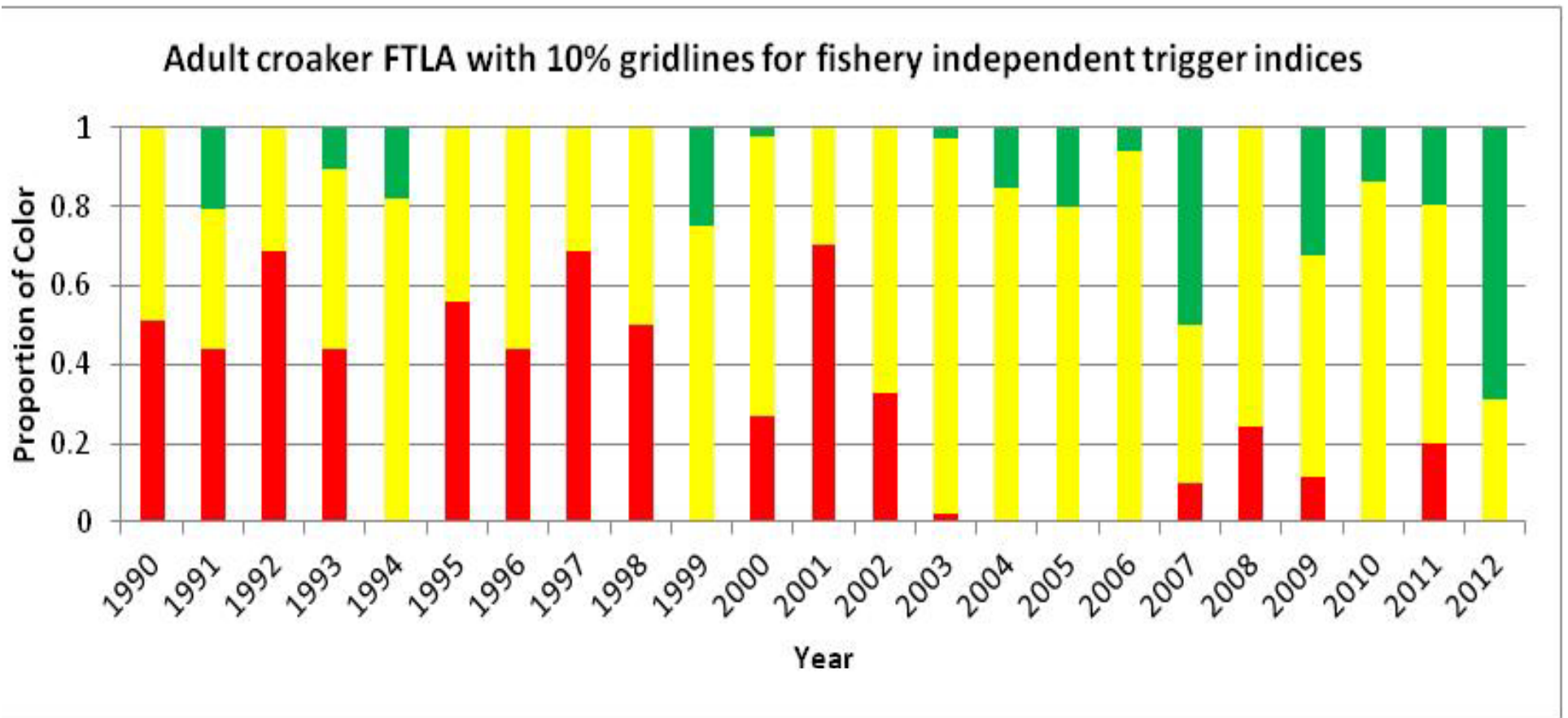
# Croaker Harvest Composite Index

## Combined Recreational & Commercial Landings



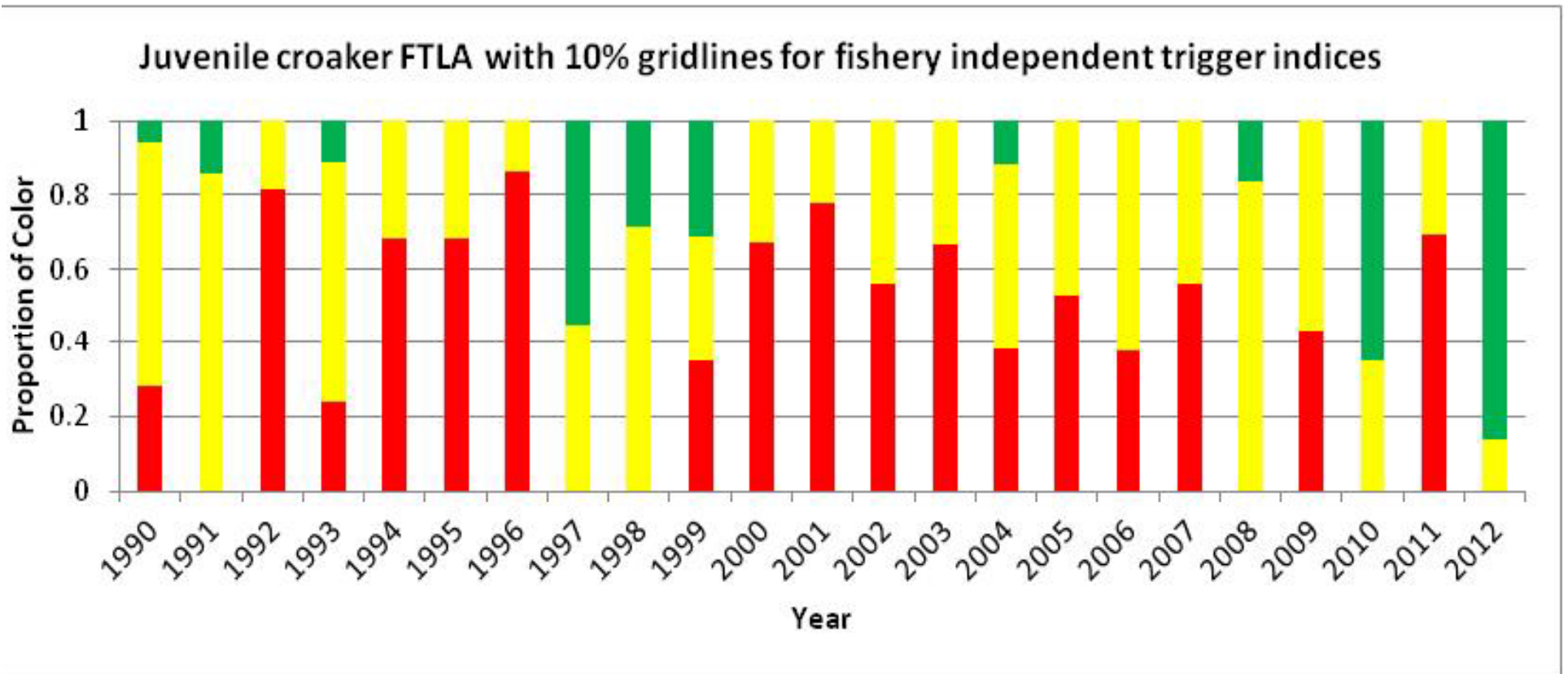
# Croaker Fishery Independent Composite Index

## Adult Index



# Croaker Fishery Independent Composite Index

## Juvenile Index



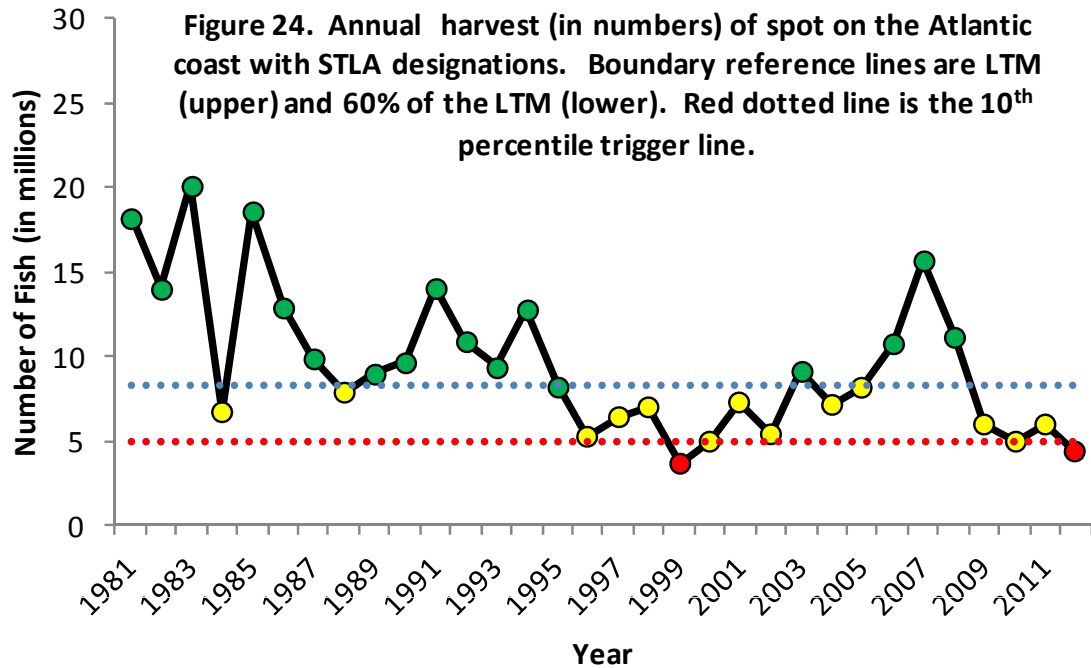


# Traffic Light Analysis (TLA) Update

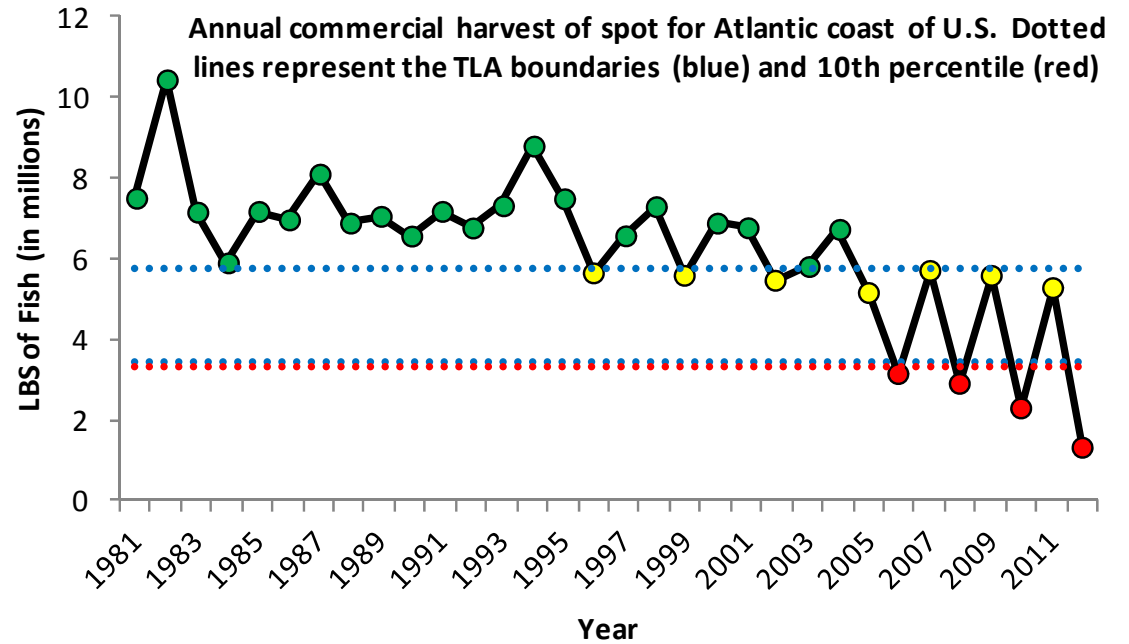
## Spot

- Commercial & recreational harvest TLA is much more indicative of change than the 10th percentile trigger.
- TLA works better for examining year to year changes.
- The current 10th percentile trigger was rarely tripped in most of the indexes and when it did, it occurred at some of the lowest values for each index.

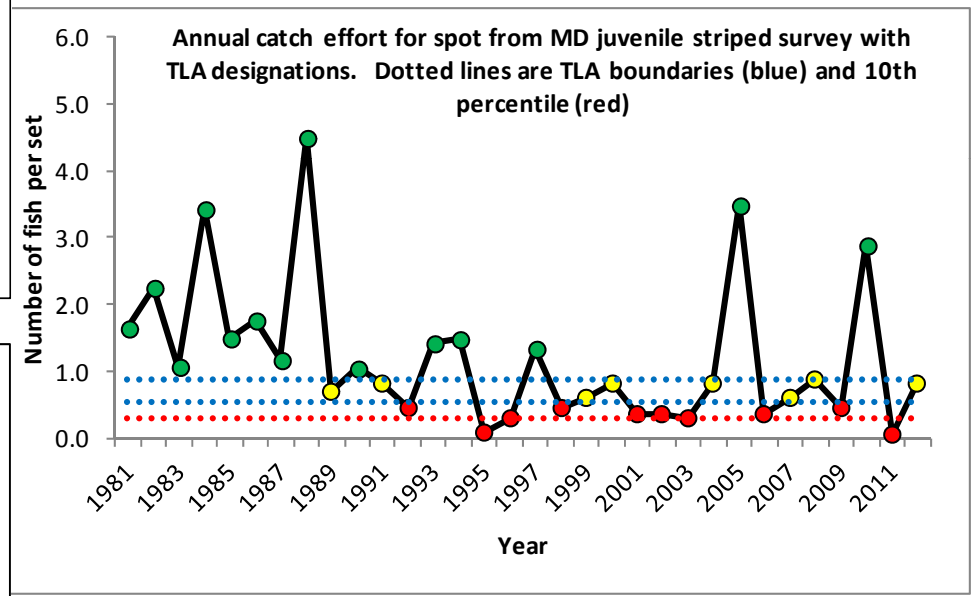
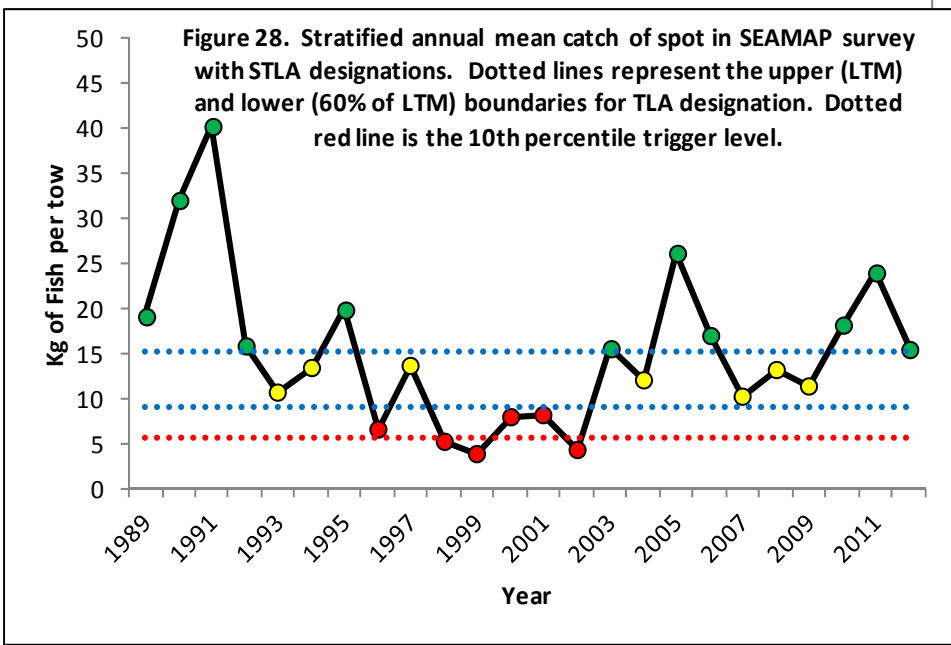
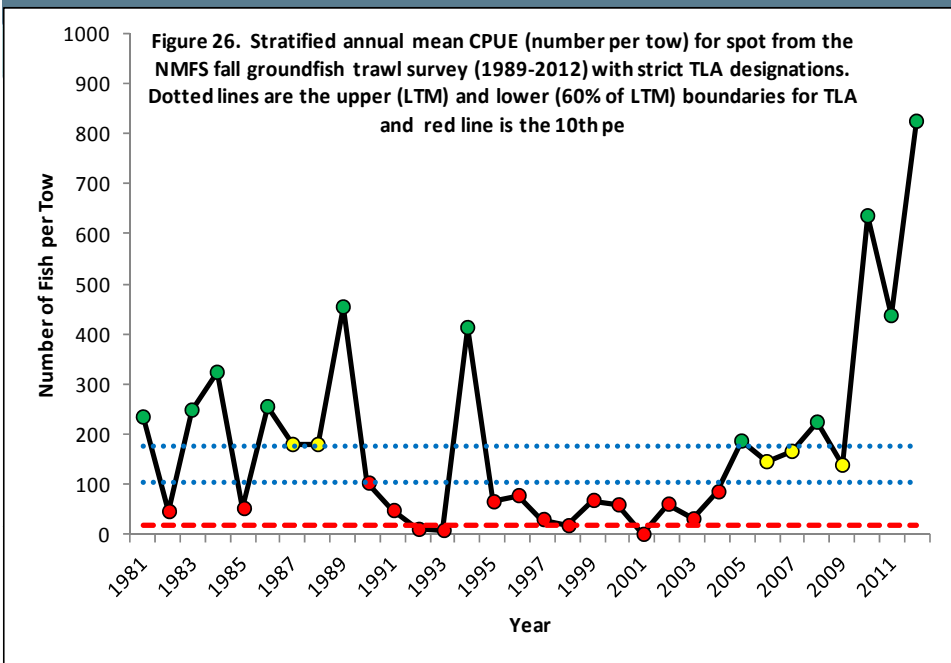




**Current Spot Trigger Indices with 10<sup>th</sup> Percentile and TLA boundaries**



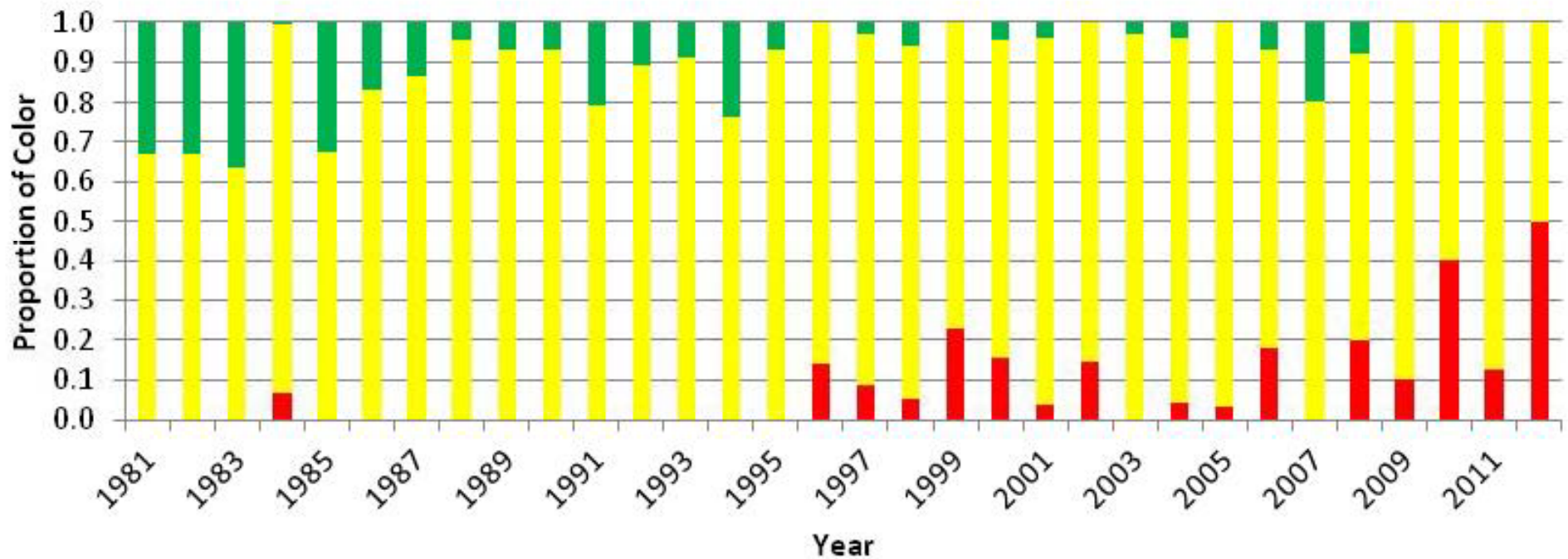
## Current Spot Trigger Indices with 10<sup>th</sup> Percentile and TLA boundaries



# Spot Harvest Composite Index

## Combined Recreational & Commercial Landings

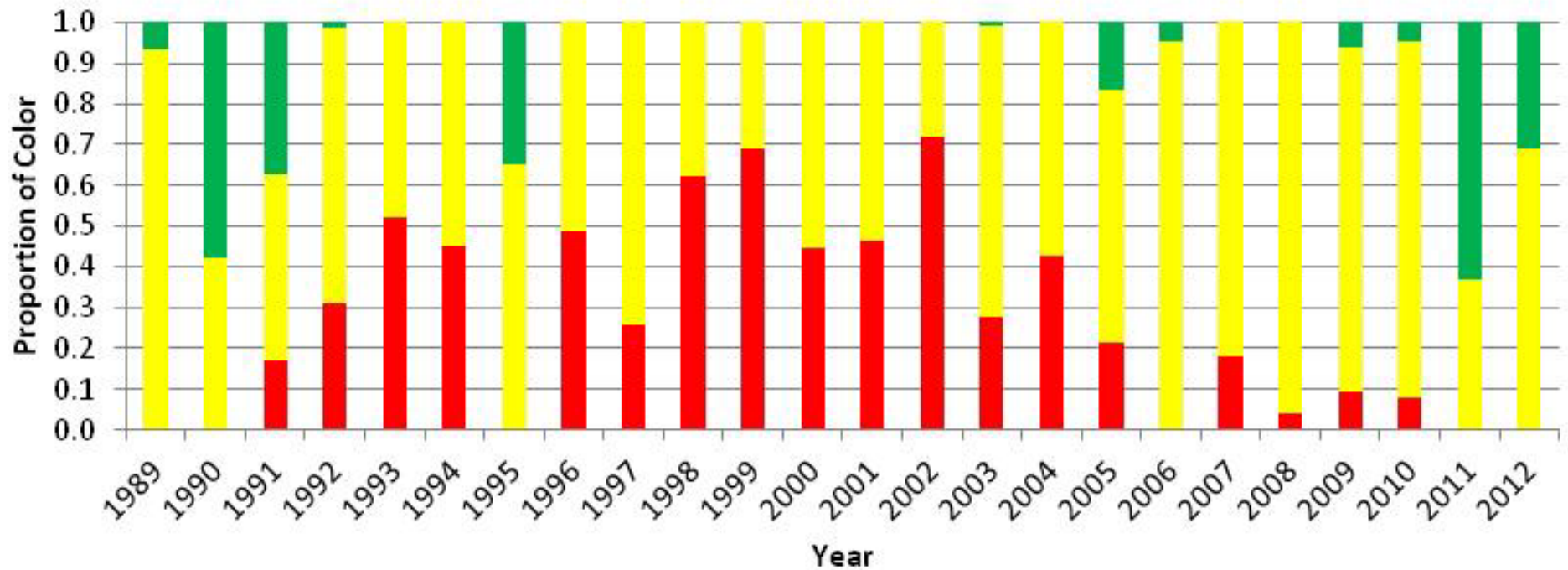
Annual FTLA color proportions for composite commercial and recreational harvest of spot for the Atlantic coast of the United States using a 1989-2012 reference period.



# Spot Fishery Independent Composite Index

## Adult Index

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





# **Draft Management Framework**

- North Carolina Blue Crab example
- Adjustments & Modifications

# Croaker Management Framework

Characteristic	Moderate management level (30% red)		Elevated management level (60% red)	
	<u>Recreational</u>	<u>Commercial</u>	<u>Recreational</u>	<u>Commercial</u>
<b>Adult abundance</b>	Catch limit: X numbers/day limit (coastwide)	Catch limit: 8" minimum (coastwide); X pounds/day limit (coastwide)	Catch limit: 9" minimum (coastwide); X numbers/day limit (coastwide)	Catch limit: 9" minimum (coastwide); X pounds/day limit (coastwide)
	Closures: state specific areas closure for 20 days after May 1 & before Oct 1	Closures:	Closures: state specific areas closure from Aug 1-Sept 1	Closures: state specific areas from Sept 1-Nov 1
	Gear Modifications:	Gear Modifications:	Gear Modifications:	Gear Modifications: gillnets prohibited from August 1-30
<b>Harvest</b>	Catch limit: X numbers/day limit (coastwide)	Catch limit: 8" minimum (coastwide); X pounds/day limit (coastwide)	Catch limit: 9" minimum (coastwide); X numbers/day limit (coastwide)	Catch limit: 9" minimum (coastwide); X pounds/day limit (coastwide)
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	Gear Modifications:	Gear Modifications:	Gear Modifications:	Gear Modifications: gillnets prohibited from August 1-30

# Spot Management Framework

Characteristic	Moderate management level (30% red)		Elevated management level (60% red)	
	<u>Recreational</u>	<u>Commercial</u>	<u>Recreational</u>	<u>Commercial</u>
Adult Abundance	Closures: May 1- June 15	Closures: NA	Closures: Sept 1- Oct 15	Closures: Sept 1- Oct 1
	Minimum Size Limit: X"	Gear Modifications:	Minimum Size Limit: X"	Gear Modifications: gillnets prohibited from Sept 1-30
Harvest	Closures: May 1- June 15	Closures: NA	Closures: Sept 1- Oct 15	Closures: Sept 1- Oct 1
	Minimum Size Limit: X"	Gear Modifications:	Minimum Size Limit: X"	Gear Modifications: gillnets prohibited from Sept 1-30



# Conclusion

- **Interim management measures, not to replace stock assessment**
- **Harvest Percentage Reduction Option**
- **Feedback needed from the Board**