

# 2022 Traffic Light Analysis for Spot and Atlantic Croaker

Atlantic States Marine Fisheries Commission  
Sciaenids Management Board  
Summer Meeting  
August 4, 2022

# Outline

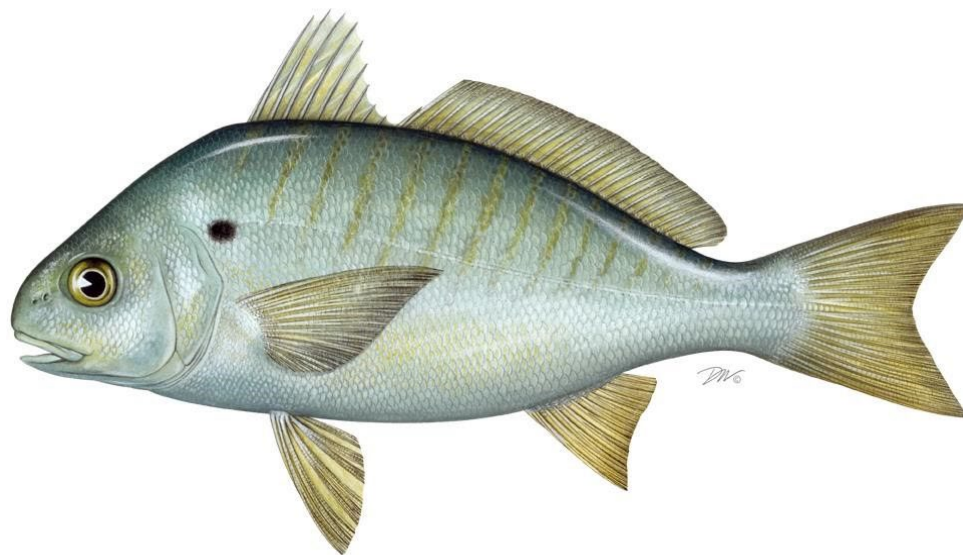


1. Impacts of data unavailability
2. 2022 TLA for Spot
3. 2022 TLA for Atlantic Croaker

# Missing Survey Data



- No ChesMMAP index values 2019-2021 for either species due to recalibration of new boat and gear
  - Should be available early to mid 2023
- Several surveys did not run or were interrupted
  - NEFSC Multispecies Bottom Trawl 2020
  - SEAMAP 2020 + spring 2021
  - Several state surveys (various impacts)
  - MRIP Data 2020

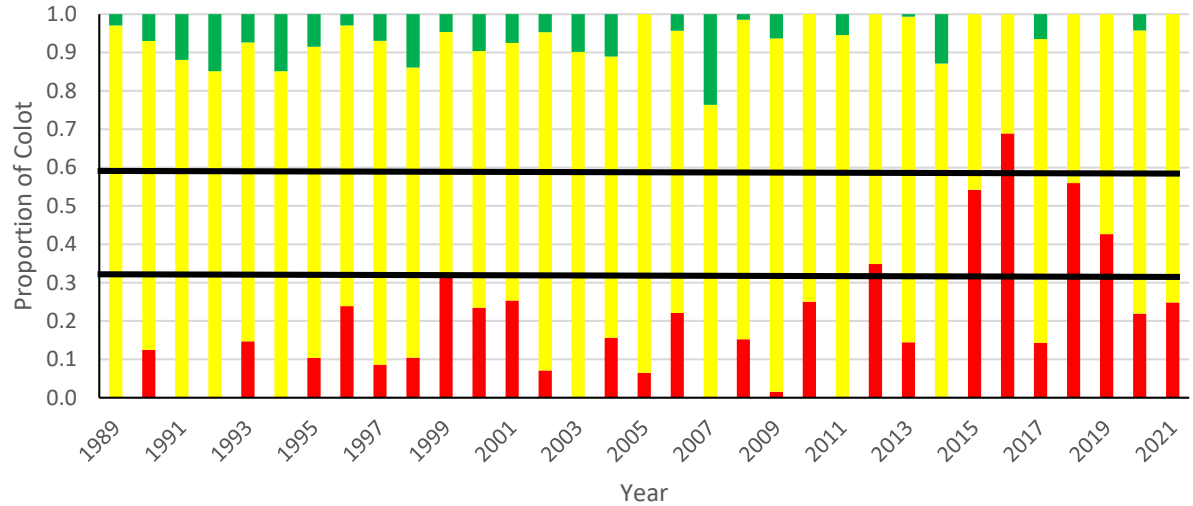


**SPOT**

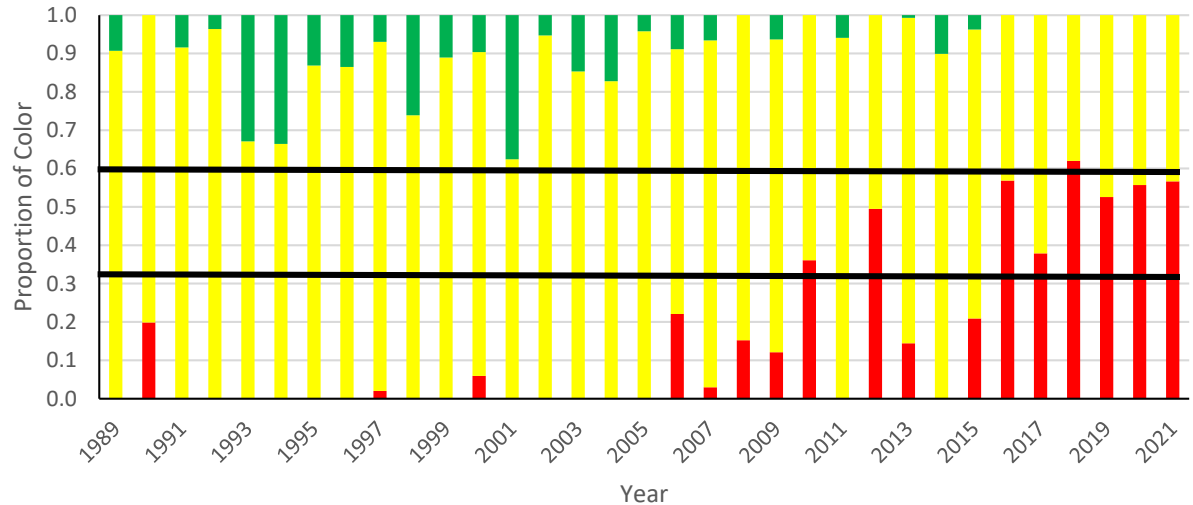
# 2022 TLA for Spot: Harvest Composite Indices



- Mid-Atlantic
  - Under the 30% threshold past two years



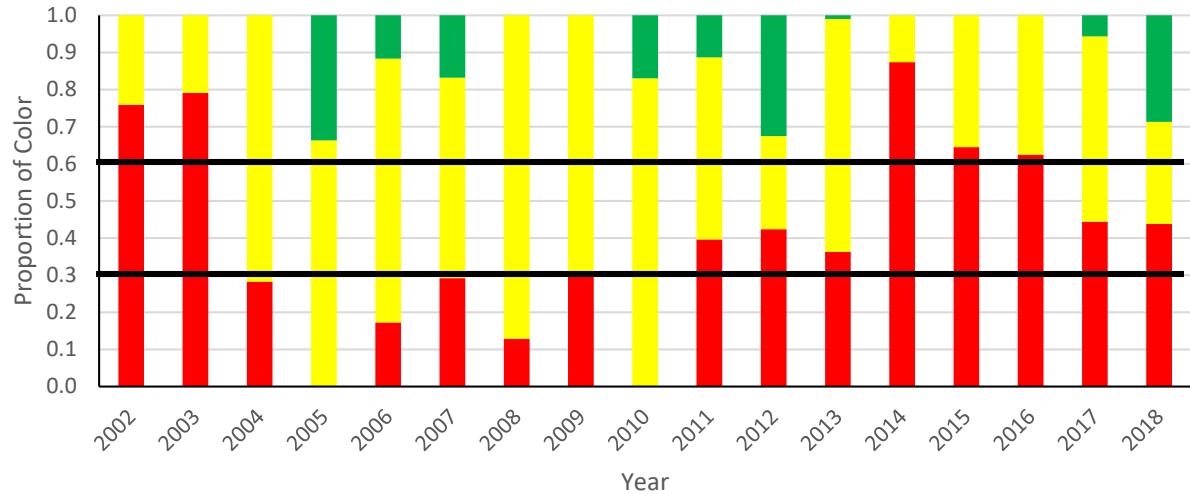
- South Atlantic
  - 57% red in 2021
  - Sixth year in a row above the 30% threshold



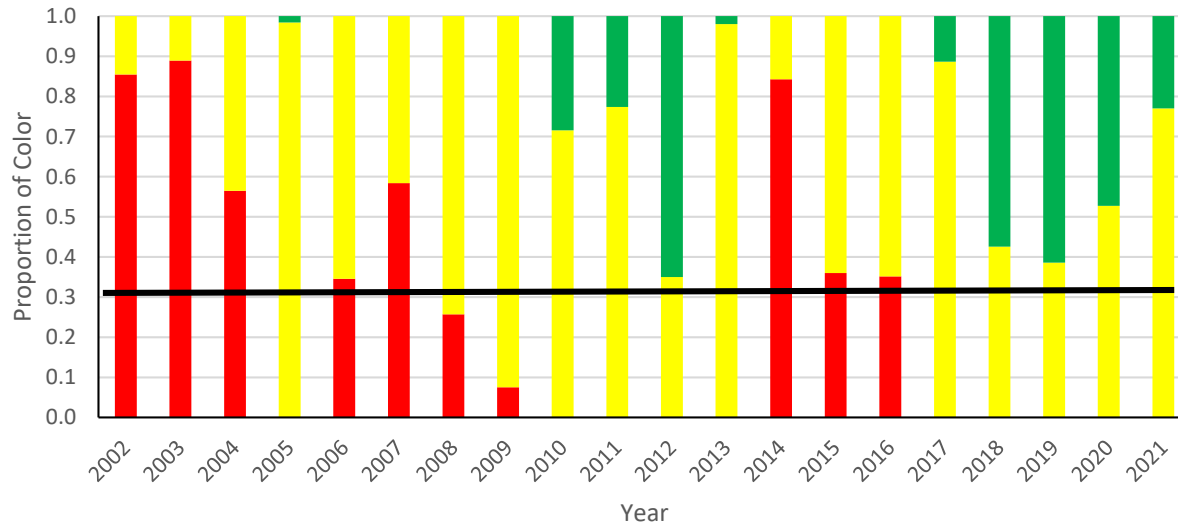
# 2022 Spot Adult Abundance Composite Index for the Mid-Atlantic



- Mid-Atlantic
  - Status unknown (no CHESMMAP since 2018)
  - Eight of most recent available years above 30%



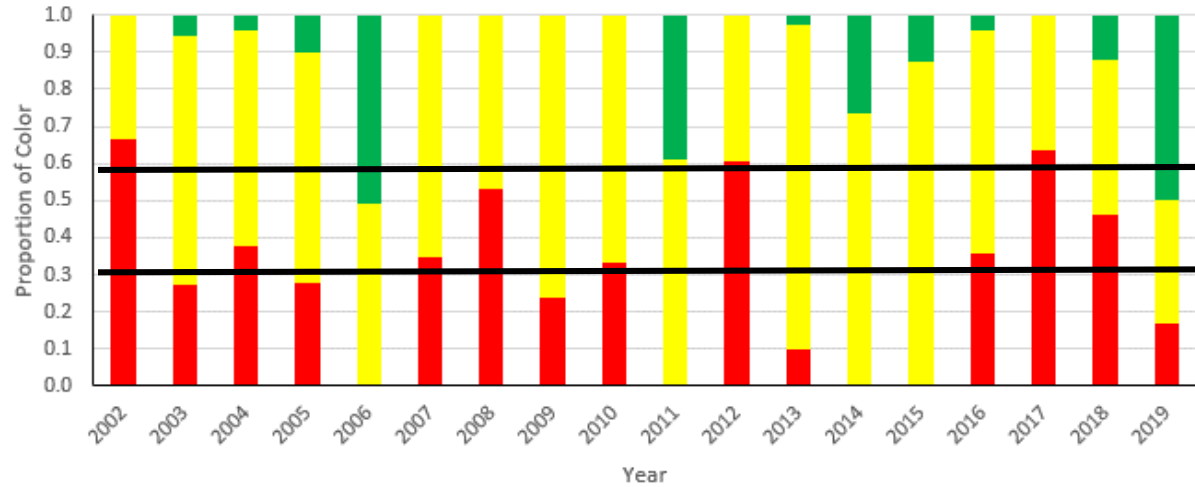
- NEFCS Age 1+ Index
  - 2020 data point is an average of 2018, 2019 and 2021



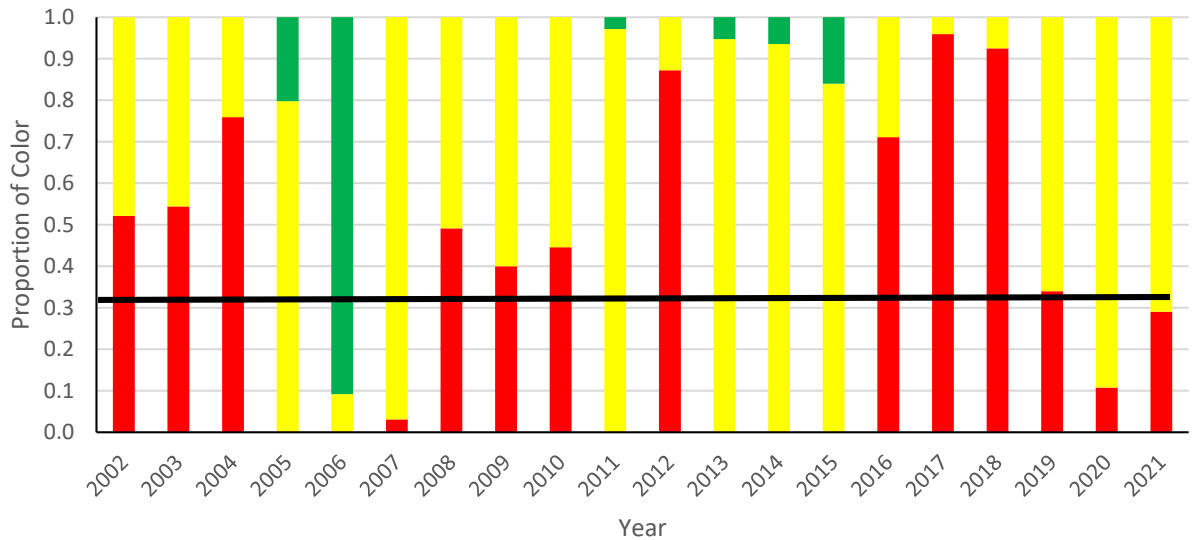
# 2022 Spot Adult Abundance Composite Index for the South Atlantic



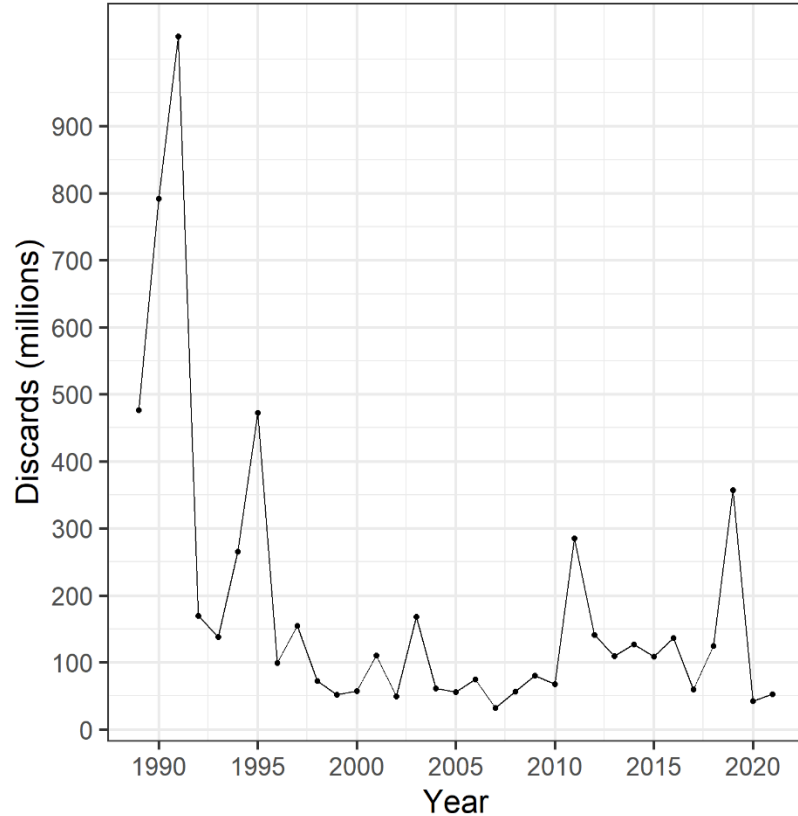
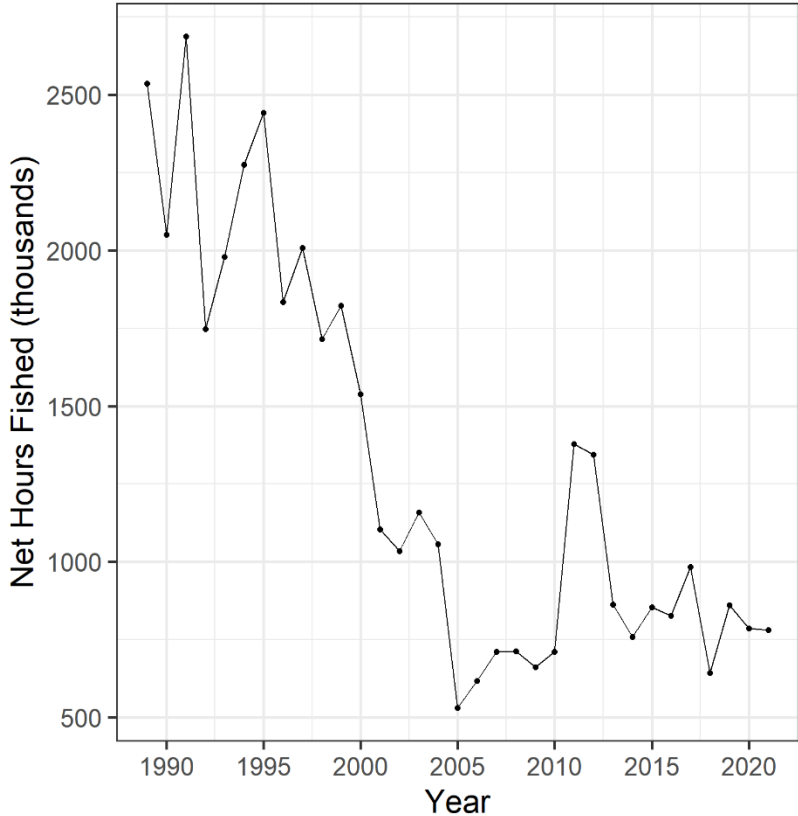
- South Atlantic
  - Status unknown (No SEAMAP since 2019)



- NC DMF Program 195 Age 1+
  - Did not survey all sites in 2020 or 2021 may be biased



# 2022 TLA for Spot: Shrimp Trawl Data



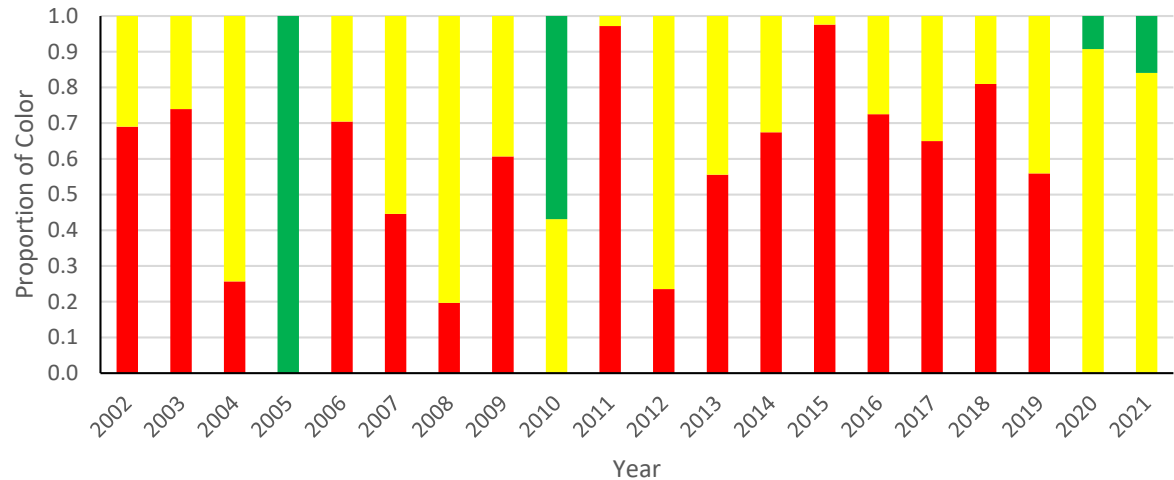
- South Atlantic Shrimp Trawl Fishery
  - Total net hours fished (left) and discards of spot (right)



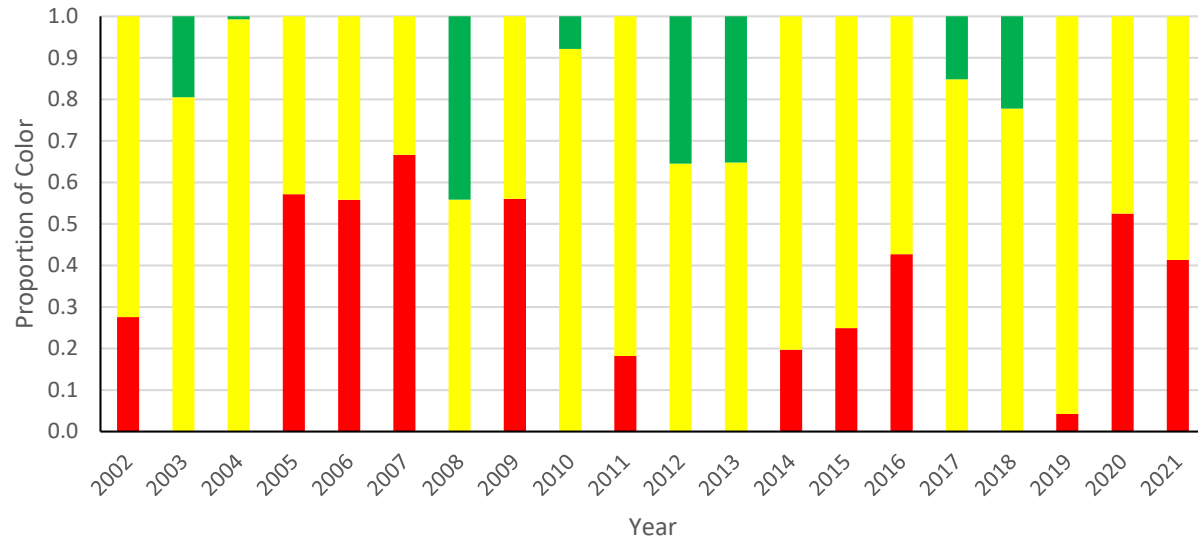
# 2022 TLA for Spot: Juvenile indices



- Mid Atlantic
  - MD seine only
  - 2020 and 2021 values above the long term mean



- South Atlantic
  - NCDMF Program 195 survey
  - 2020 and 2021 values above 30 % threshold



# 2022 TLA for Spot: Summary



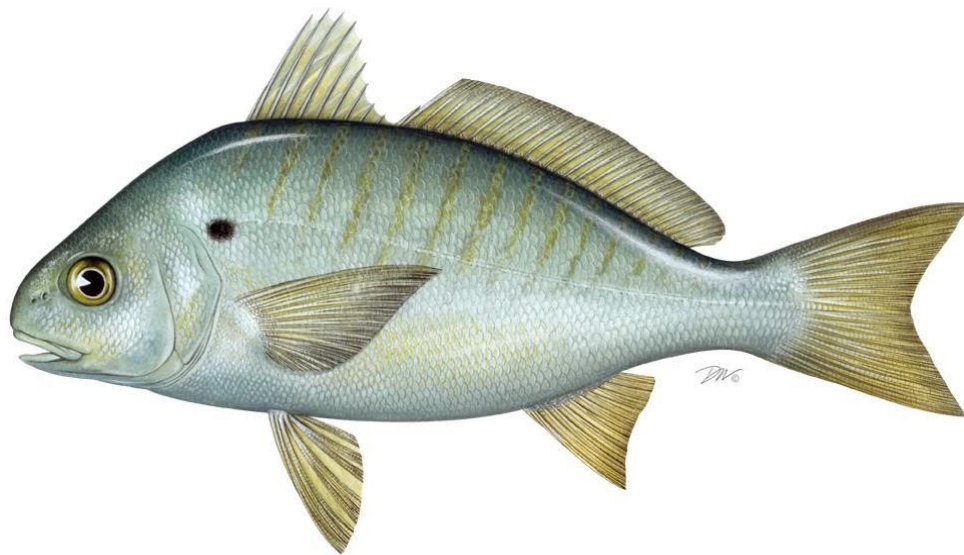
TLA Metric	Spot		
	2019	2020	2021
<b>Mid-Atlantic Harvest</b>	43% red	22% red	23% red
<b>South Atlantic Harvest</b>	52% red	56% red	57% red
<b>Mid-Atlantic Adult Index</b>	Unknown	Unknown	Unknown
<b>South Atlantic Adult Index</b>	50% green	Unknown	Unknown
<b>2022 TLA Status</b>	Mid-Atlantic harvest composite did not trigger, South Atlantic did trigger (30% level). Mid-Atlantic and South Atlantic abundance composite remain unknown.		

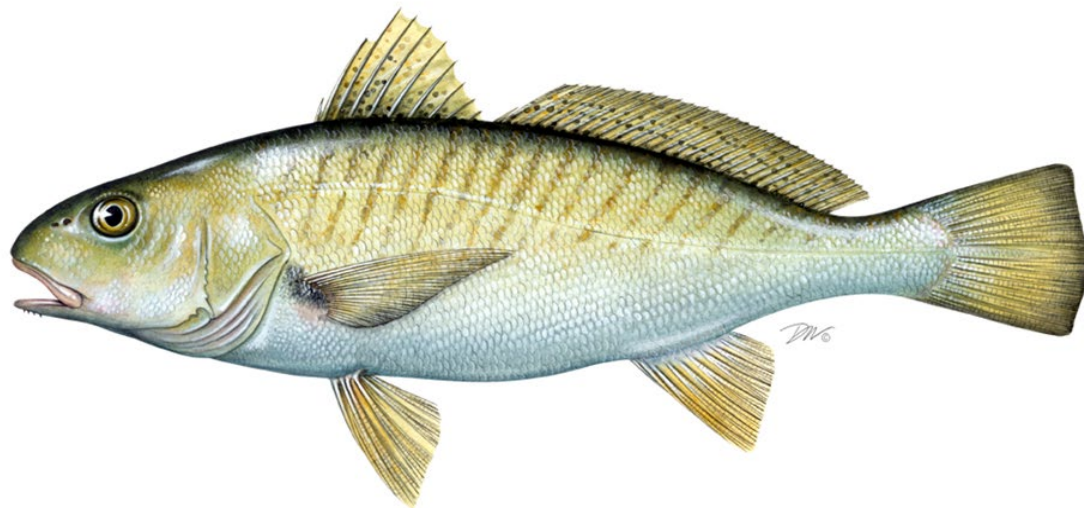
# 2022 Spot TLA: TC Management Recommendation



- The TC recommends maintaining current regulations for the 2023 fishing year.
  - The adult abundance metric in both regions is unknown.
  - Harvest levels have not shown significant improvement.
  - The full CHESMMAP time series and 2022 values for all independent indices should be available for evaluation in 2023.

# Questions?



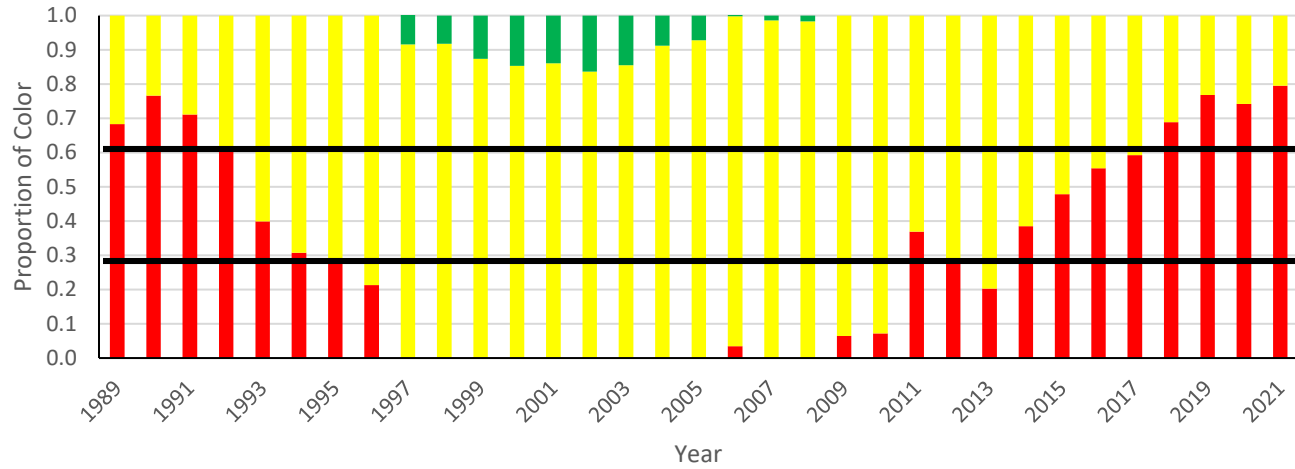


**ATLANTIC CROAKER**

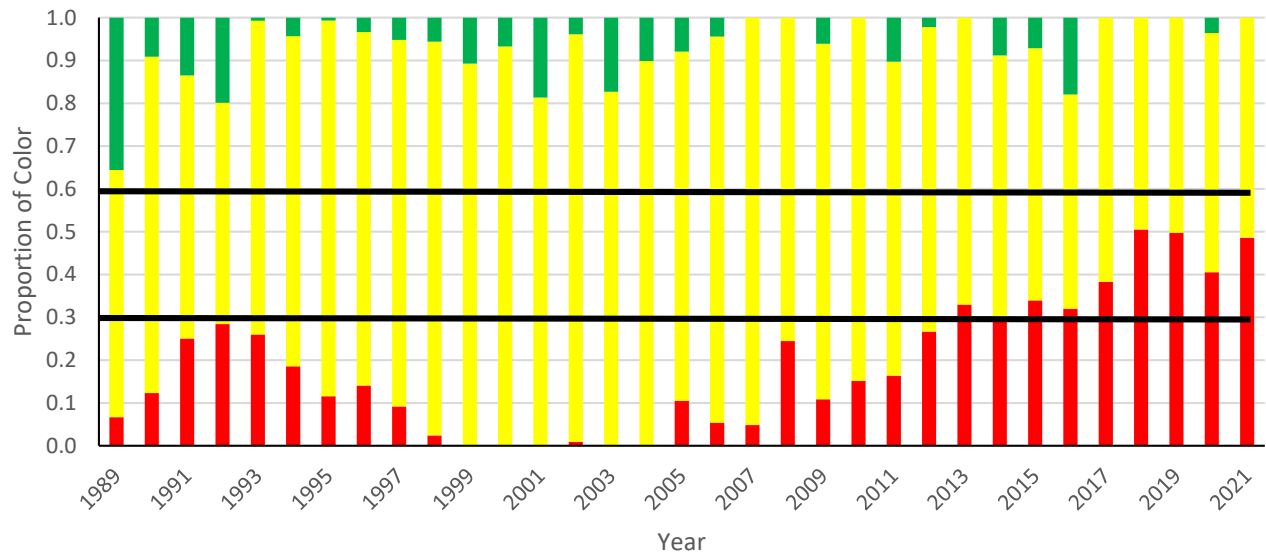
# 2022 TLA for Atlantic Croaker: Harvest Composite Indices



- Mid-Atlantic harvest composite



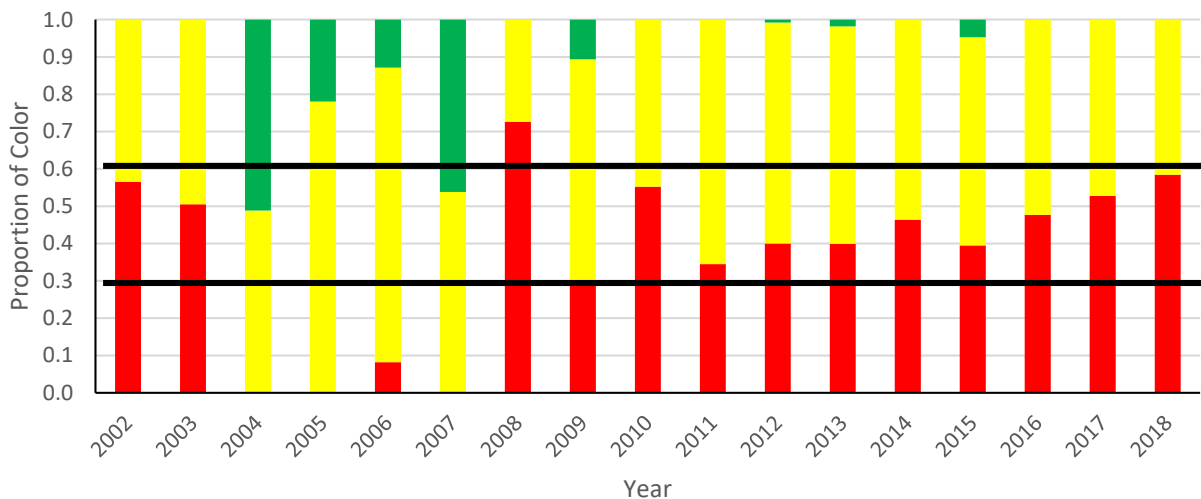
- South Atlantic harvest composite



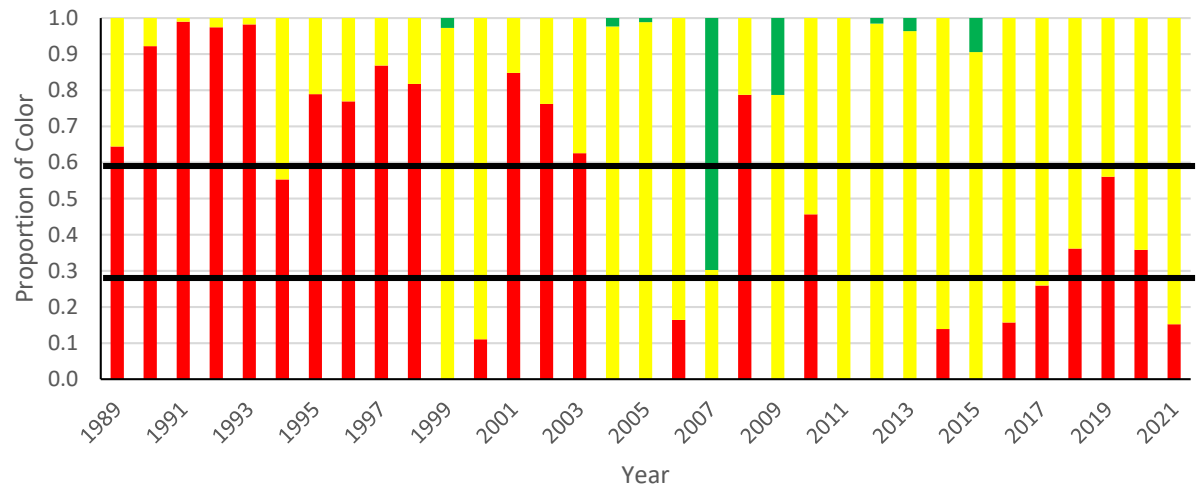
# 2022 TLA for Atlantic Croaker: Adult Abundance Composite Indices



- Mid-Atlantic adult abundance composite (ChesMMAP + NEFSC)



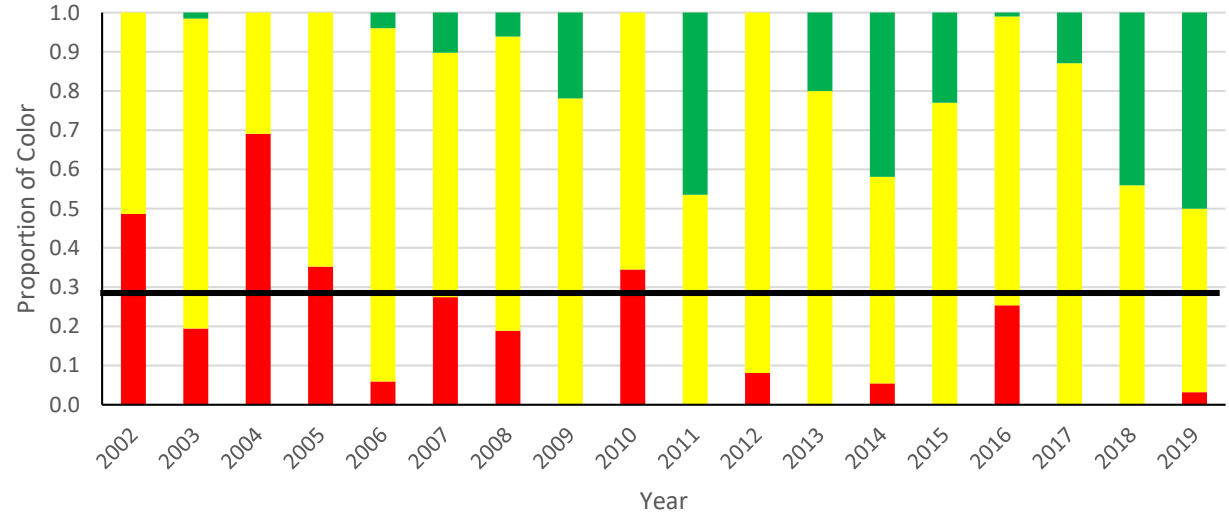
- NEFSC



# 2022 TLA for Atlantic Croaker: Adult Abundance Composite Indices



- South Atlantic adult abundance composite (SEAMAP+SC Trammel)



- SC Trammel

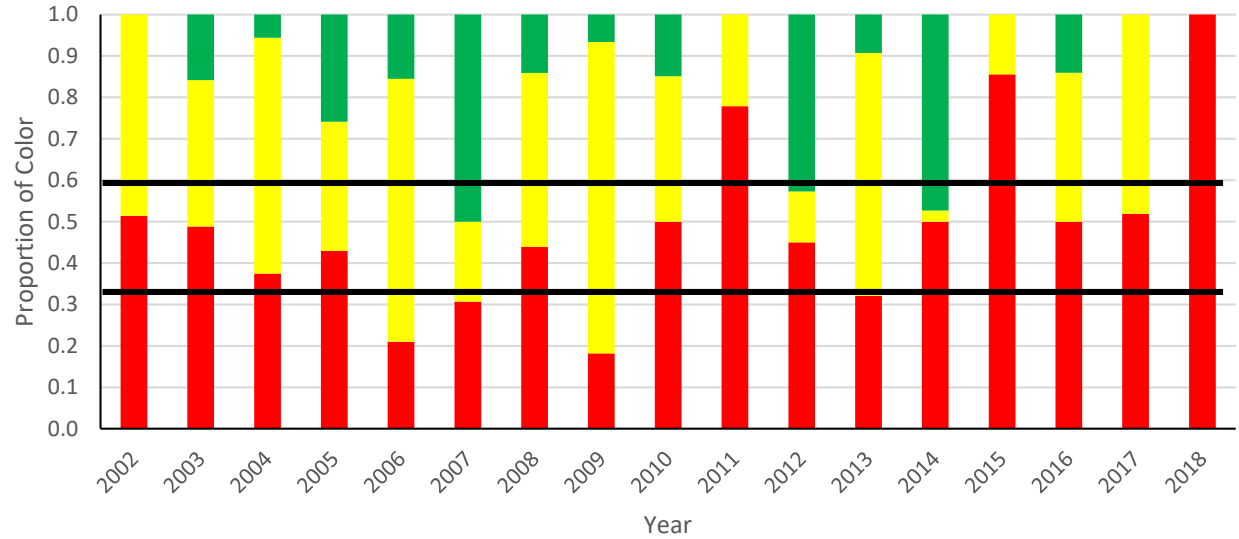




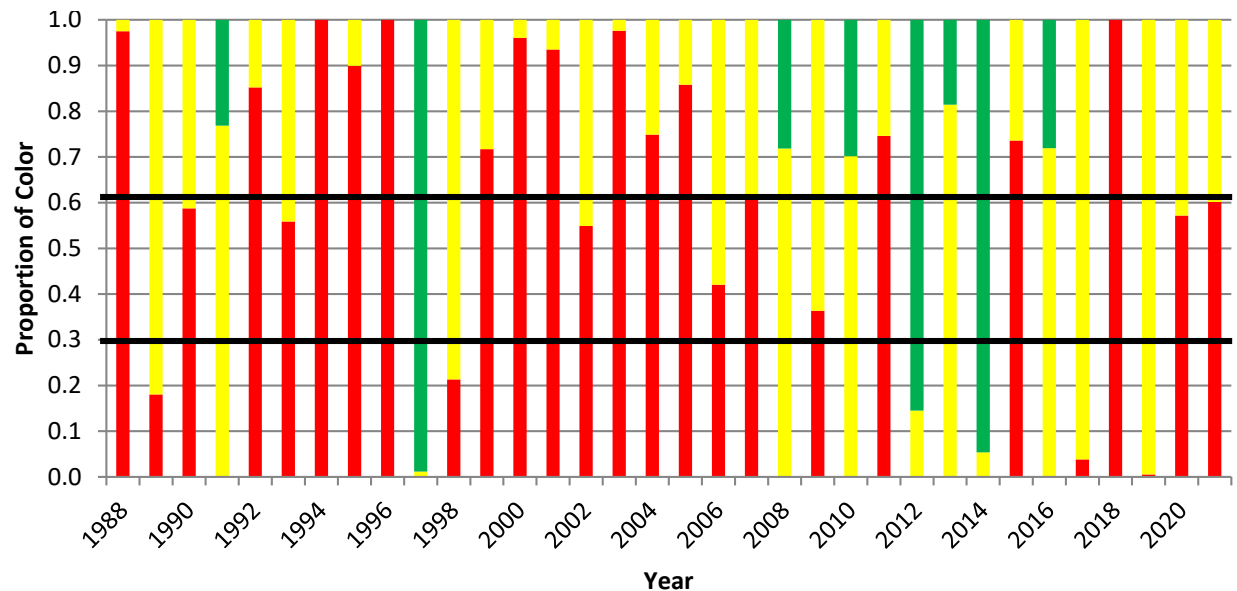
# 2022 TLA for Atlantic Croaker: Juvenile indices



- Mid-Atlantic juvenile abundance composite (ChesMMAP +VIMS)



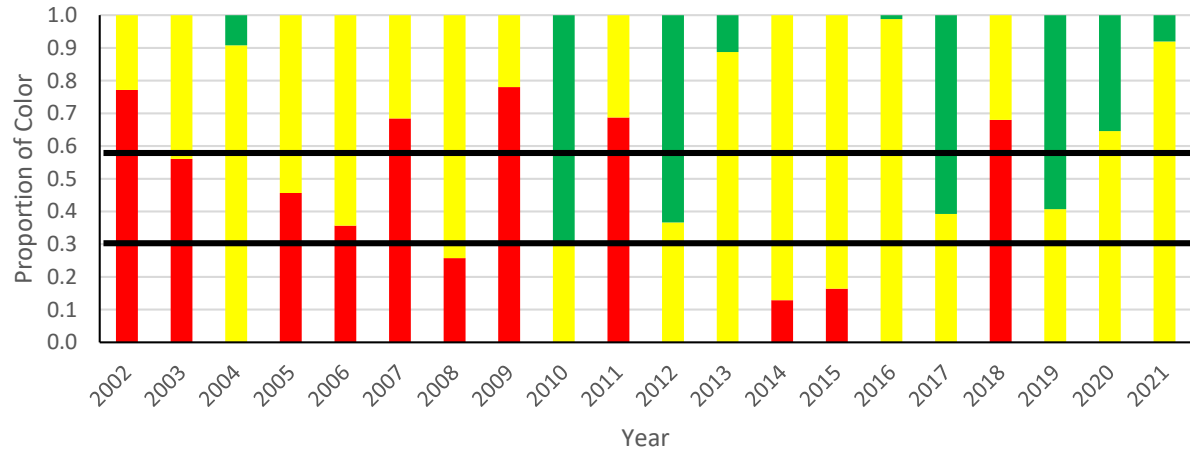
- VIMS



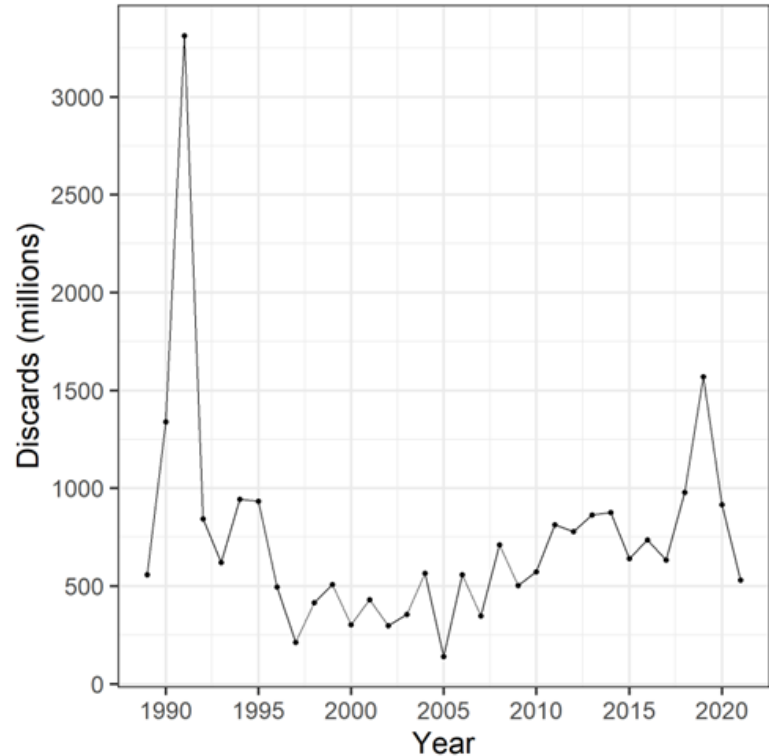
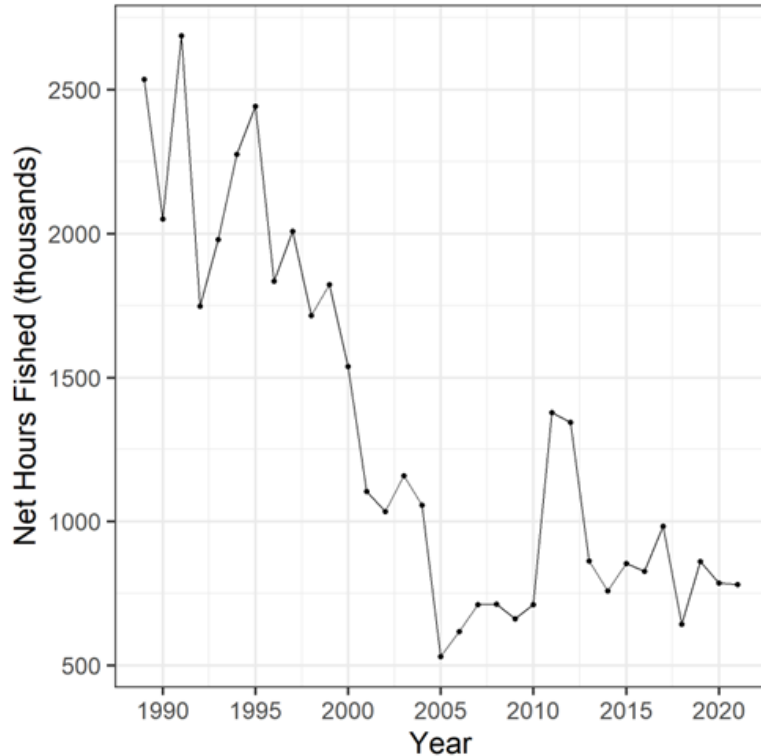
# 2022 TLA for Atlantic Croaker: Juvenile indices



- South Atlantic juvenile abundance



# 2022 TLA for Atlantic Croaker: Shrimp Trawl



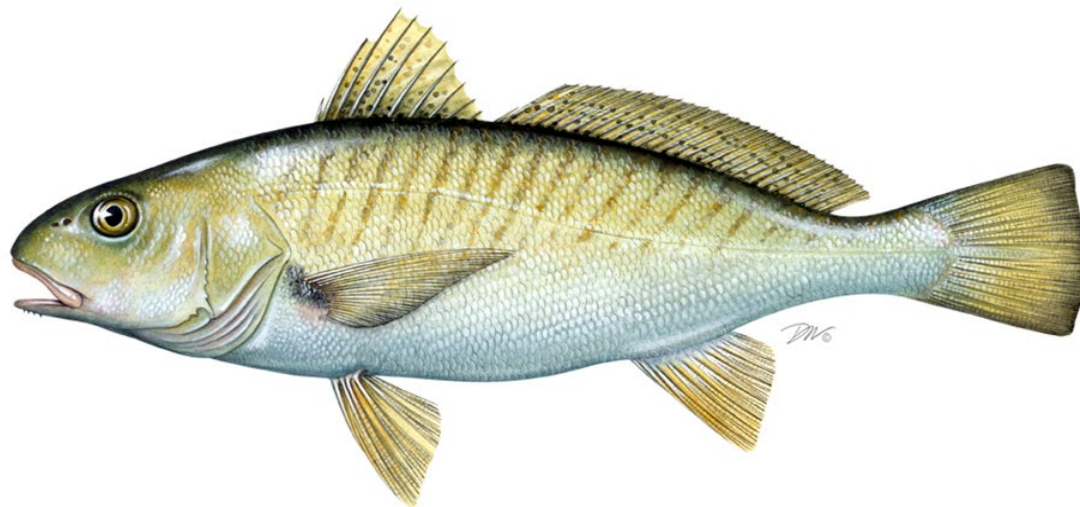
- South Atlantic Shrimp Trawl Fishery
  - Total net hours fished (left) and discards of croaker(right)

# 2022 TLA for Atlantic Croaker: Summary



TLA Metric	Atlantic Croaker			
	2018	2019	2020	2021
Mid-Atlantic Harvest	69% red	77% red	74% red	79% red*
South Atlantic Harvest	51% red	50% red	41% red	49% red*
Mid-Atlantic Adult Index	58% red	Unknown	Unknown	Unknown
South Atlantic Adult Index	44% green	50% green	Unknown	Unknown
2022 TLA Status	Status Unknown			

# Questions?

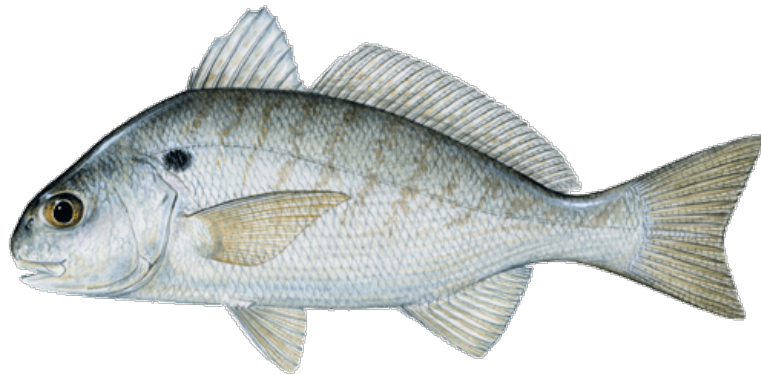


# Developing Chesapeake Bay-specific abundance estimates for spot

August 4, 2022

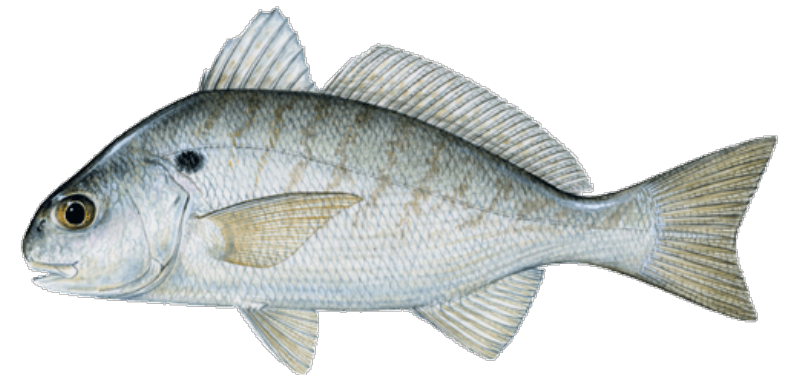
Mike Wilberg - UMCES

Rob Latour - VIMS



# Background

- There is broad interest in understanding the effects of environmental changes on fish and shellfish populations in the Chesapeake Bay
- We lack Bay-wide estimates for most species, which hampers our ability to determine causes of change in the natural resource community



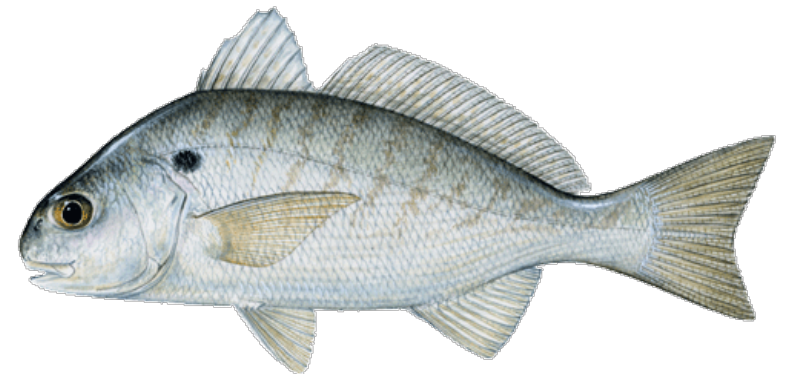
# Objectives

- Develop a spatial model that estimates abundance and mortality rates for spot in the Chesapeake Bay,
- Estimate the effects of environmental drivers on population dynamics, and
- Make the estimates publicly available to facilitate other studies



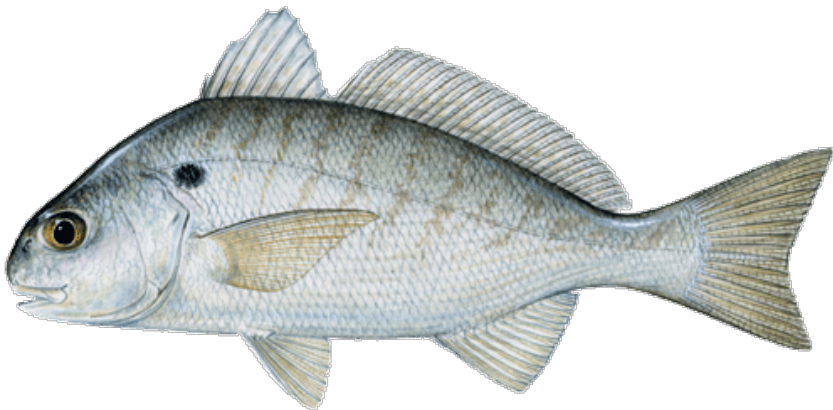
# Spot

- Spot was selected as our second species spring 2022
- Development of a model for an important forage species
- Spot does not currently have an accepted assessment model
- New assessment is occurring soon – we will work closely with the TC

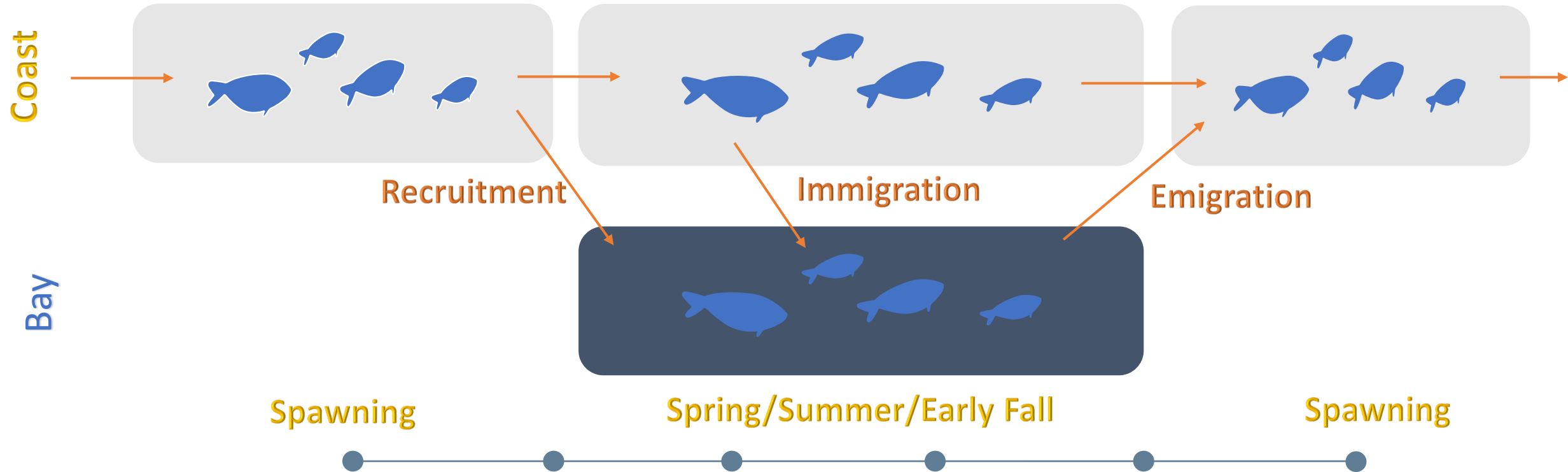


# Model structure

- Age-structured, spatial, statistical catch-at-age model
  - 2 populations and 2 areas
  - Use available survey and catch data from all states
- Empirical analyses of survey data – shifting distribution?
- Management strategy evaluation



# Model structure



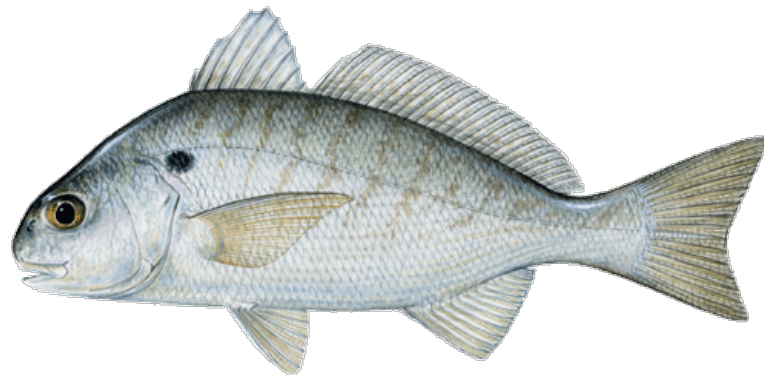
# Data sources

- Catch

- Commercial catch-at-age all states
- Recreational catch-at-age (MRIP) all states
- Discards

- Indices of abundance

- ChesMMAP Trawl
- VIMS Juv. Trawl
- NEFSC Trawl
- NC Pamlico Sound Survey
- NEAMAP
- SEAMAP

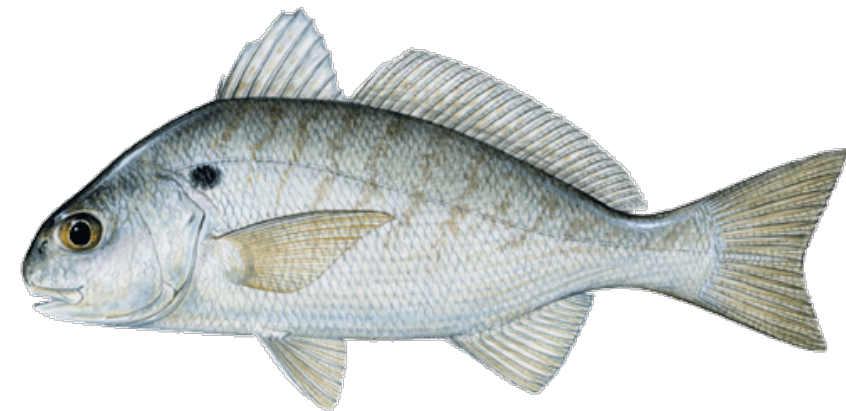


# Estimated parameters

- Recruitment in each area and abundance in the first year
- Fishing intensity and selectivity for each fishery
- Survey catchability and selectivity
- Movement parameters that describe the proportion of the population in each area during a time-step

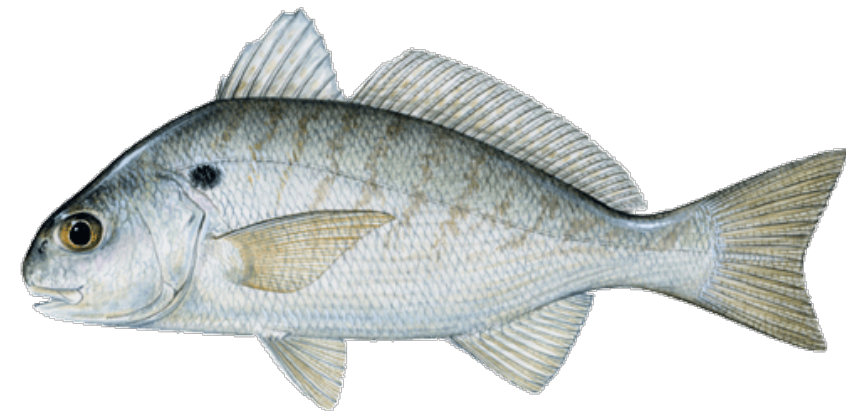
# Spot – next steps

- Submit data requests
- Begin developing age-structured spatial model (initially will be similar to the striped bass model)

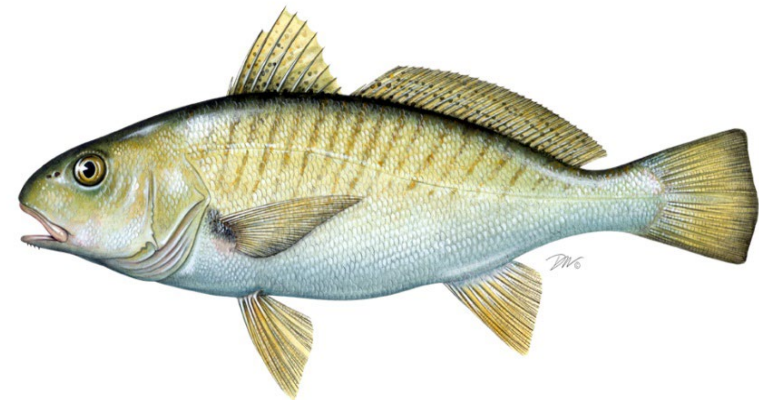
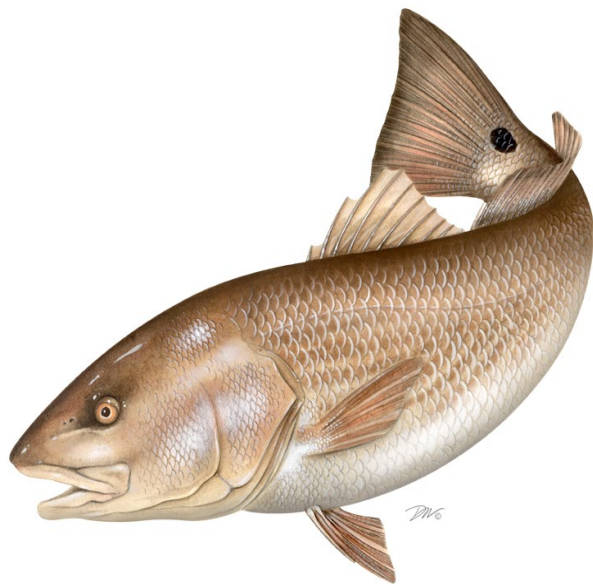


# Acknowledgments

- Mandy Bromilow (NCBO)
- Tracey Bauer (ASFMC)
- Spot TC
  
- Funding
  - NOAA Chesapeake Bay Office
  - VIMS
  - CBL



# Red Drum and Atlantic Croaker Fishery Management Plan Review

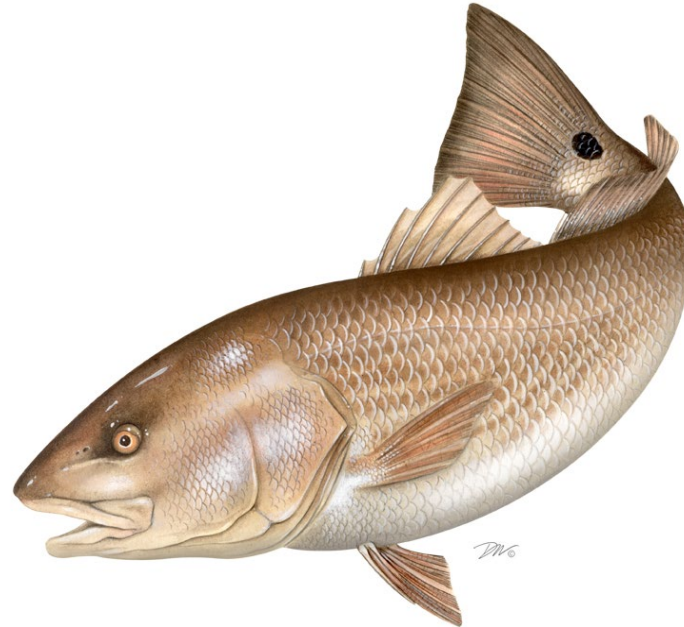


Sciaenids Management Board  
August 4, 2022

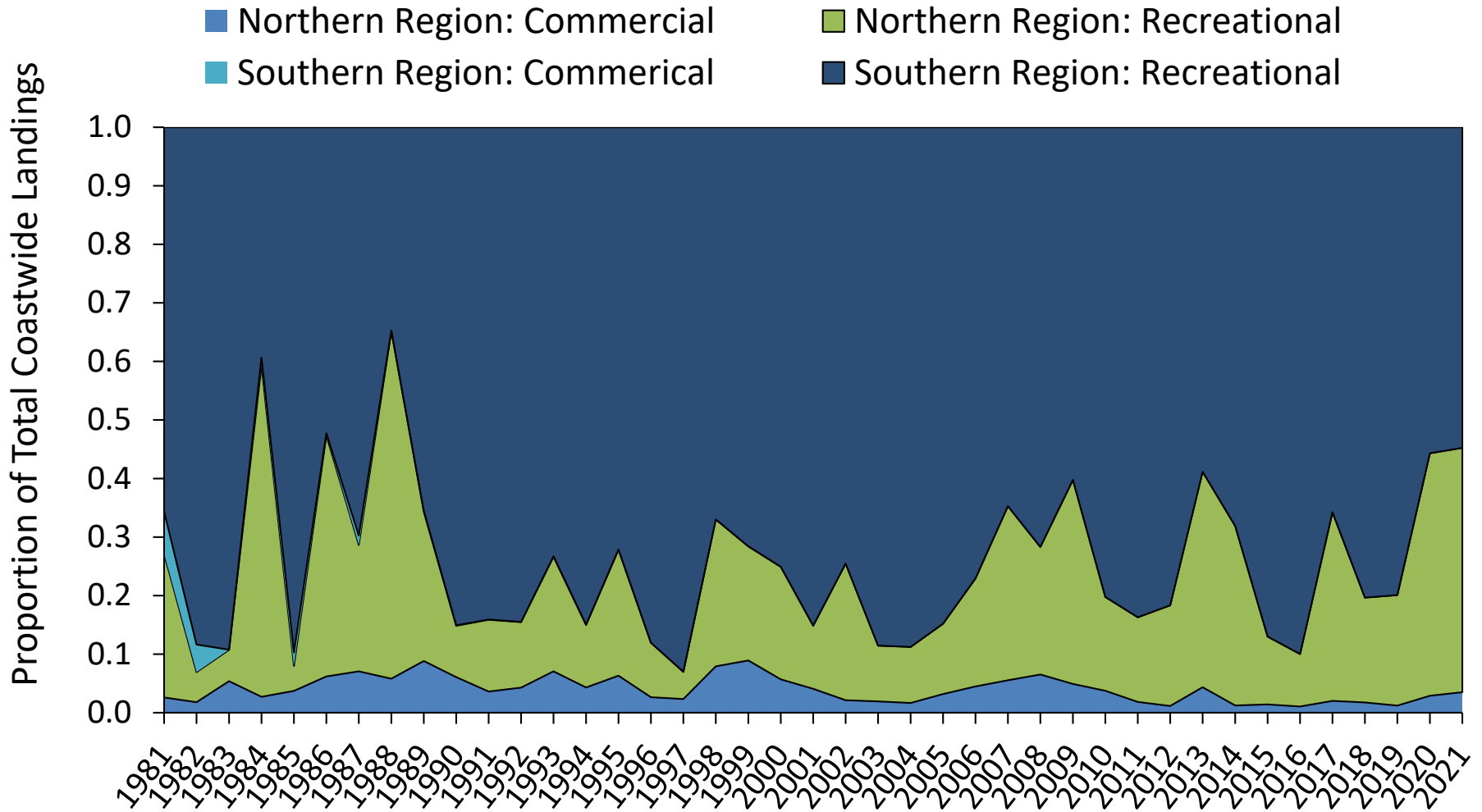


# Red Drum

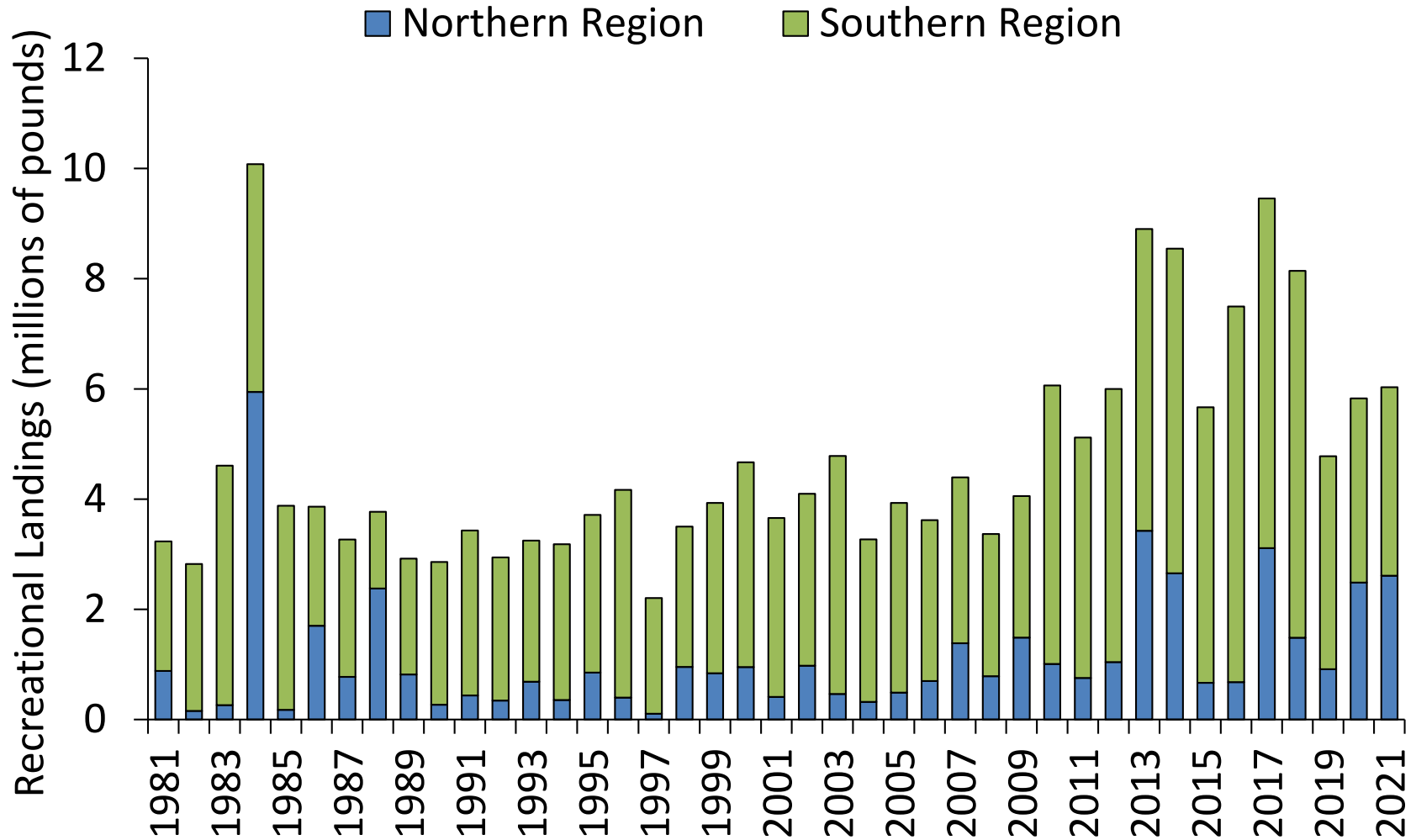
## Fishery Management Plan Review



# Status of the Fishery – Total Landings



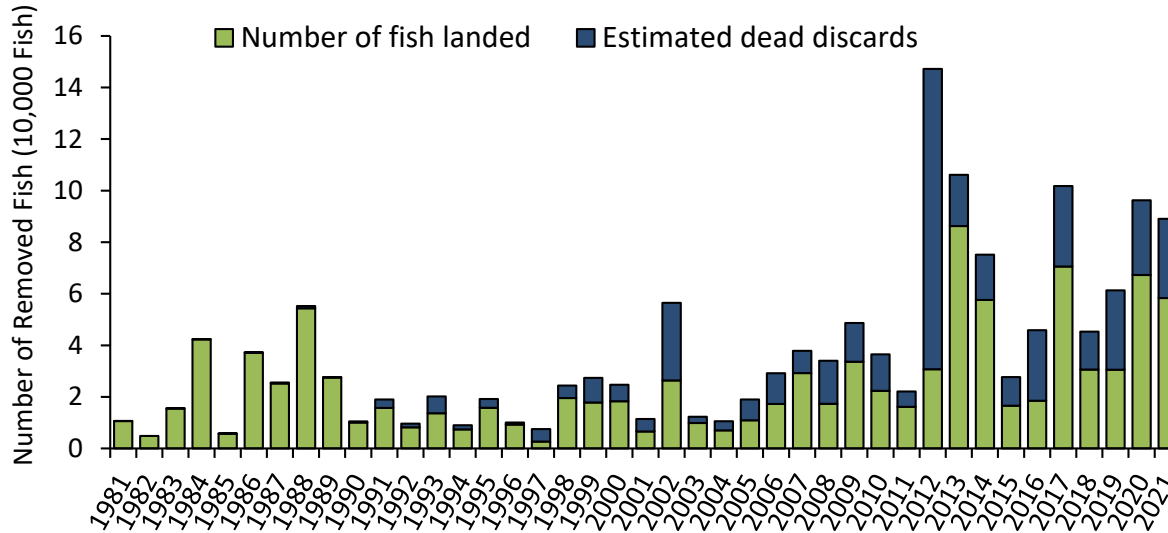
# Status of the Fishery - Recreational Landings



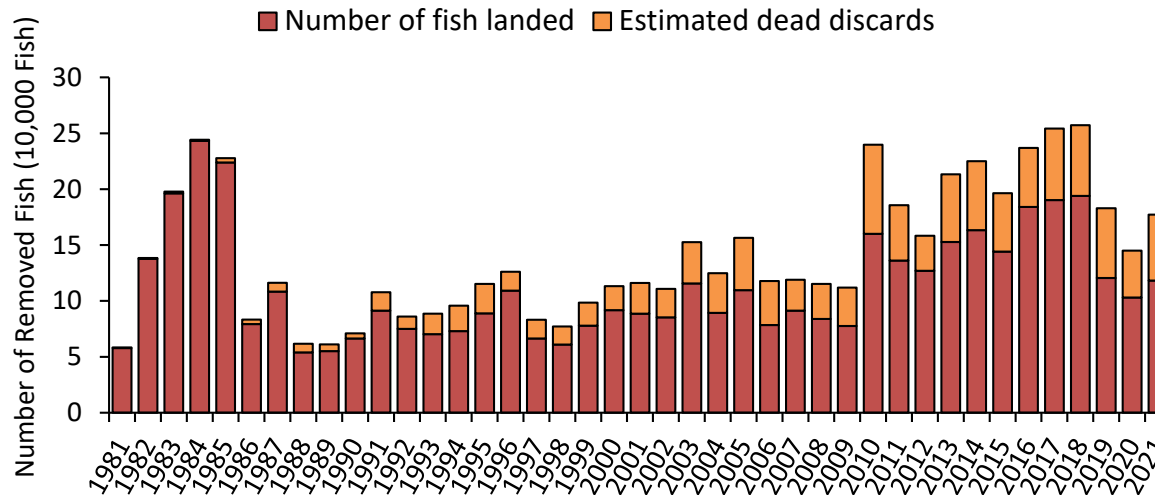
# Status of the Fishery - Recreational Removals by Region



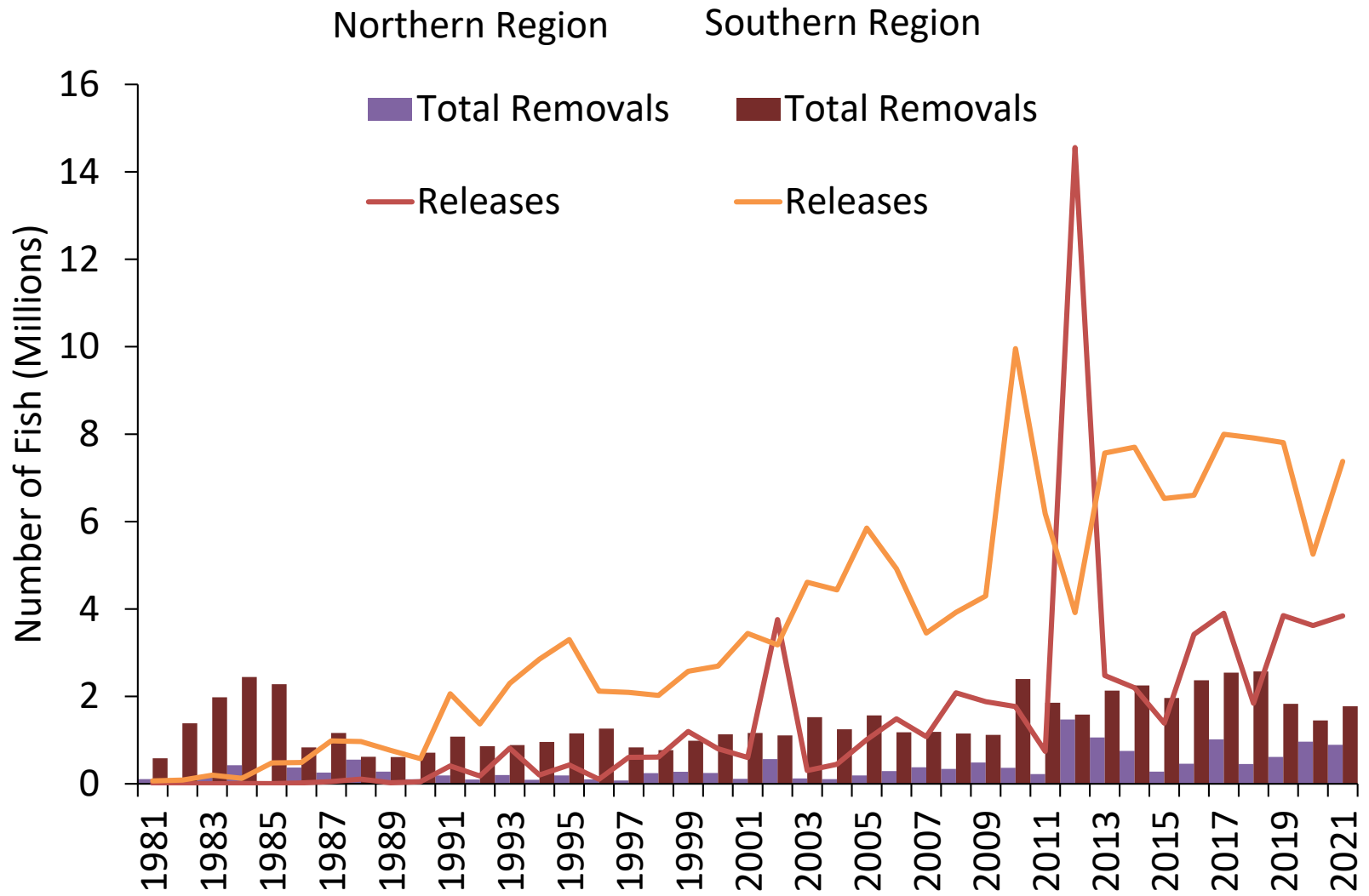
## Northern Region



## Southern Region



# Status of the Fishery – Recreational Removals and Releases

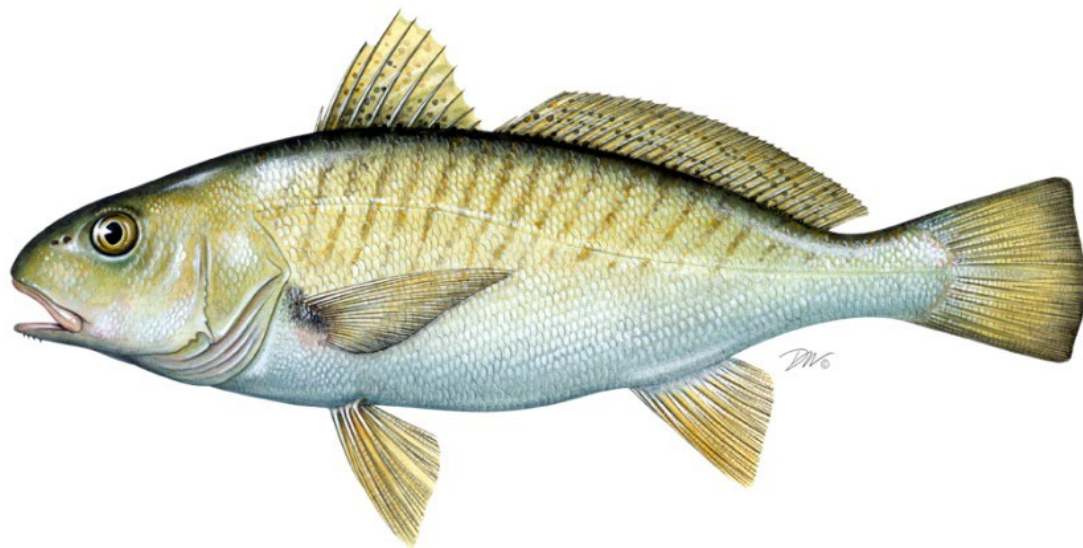


# PRT Recommendations

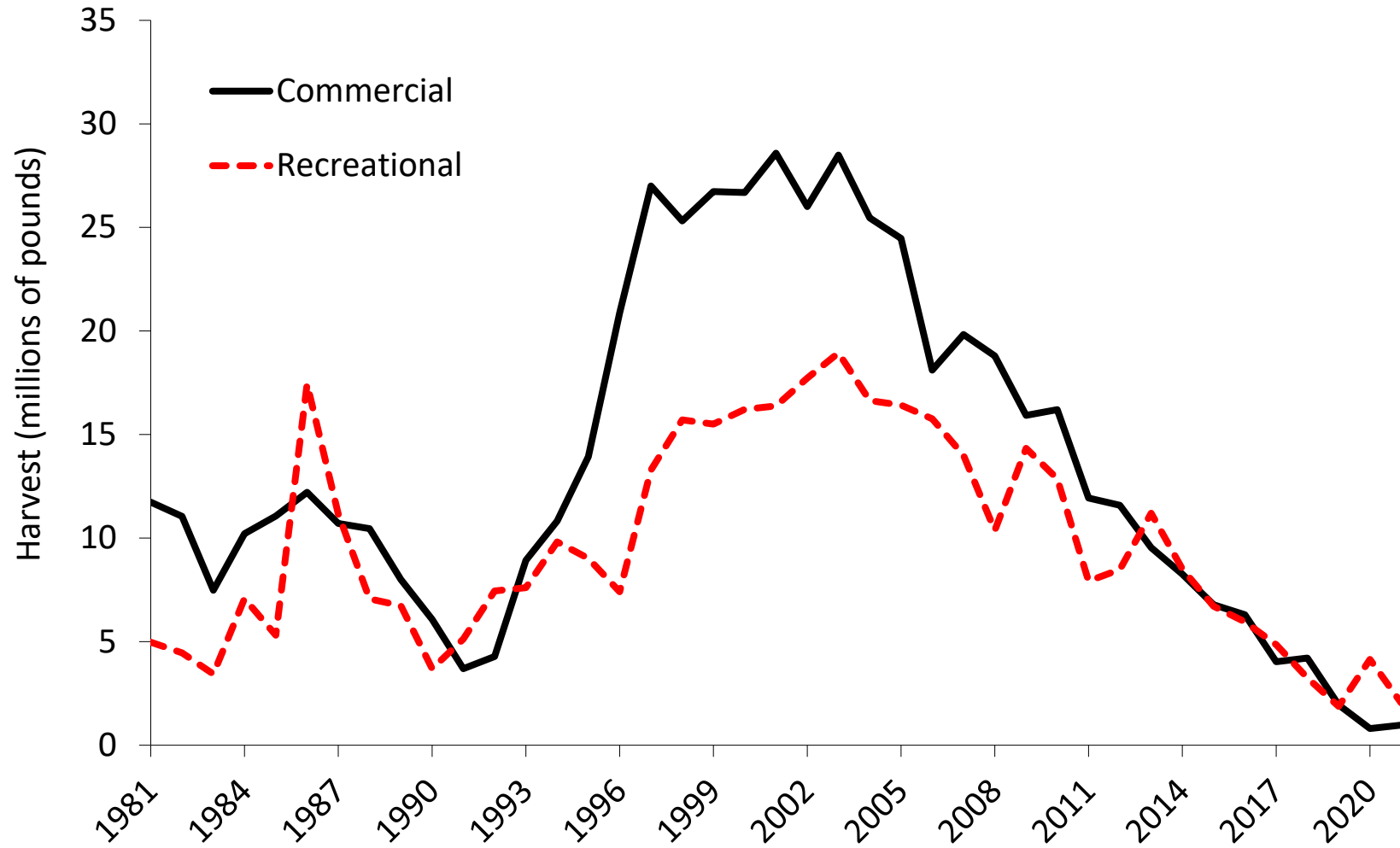


- Found no inconsistencies from the FMP
- PRT recommends the approval of state compliance reports and *de minimis* status for New Jersey and Delaware
- Additional research/monitoring recommendations found in FMP Review document and Red Drum Simulation Assessment and Peer Review Report document

# Atlantic Croaker Fishery Management Plan Review

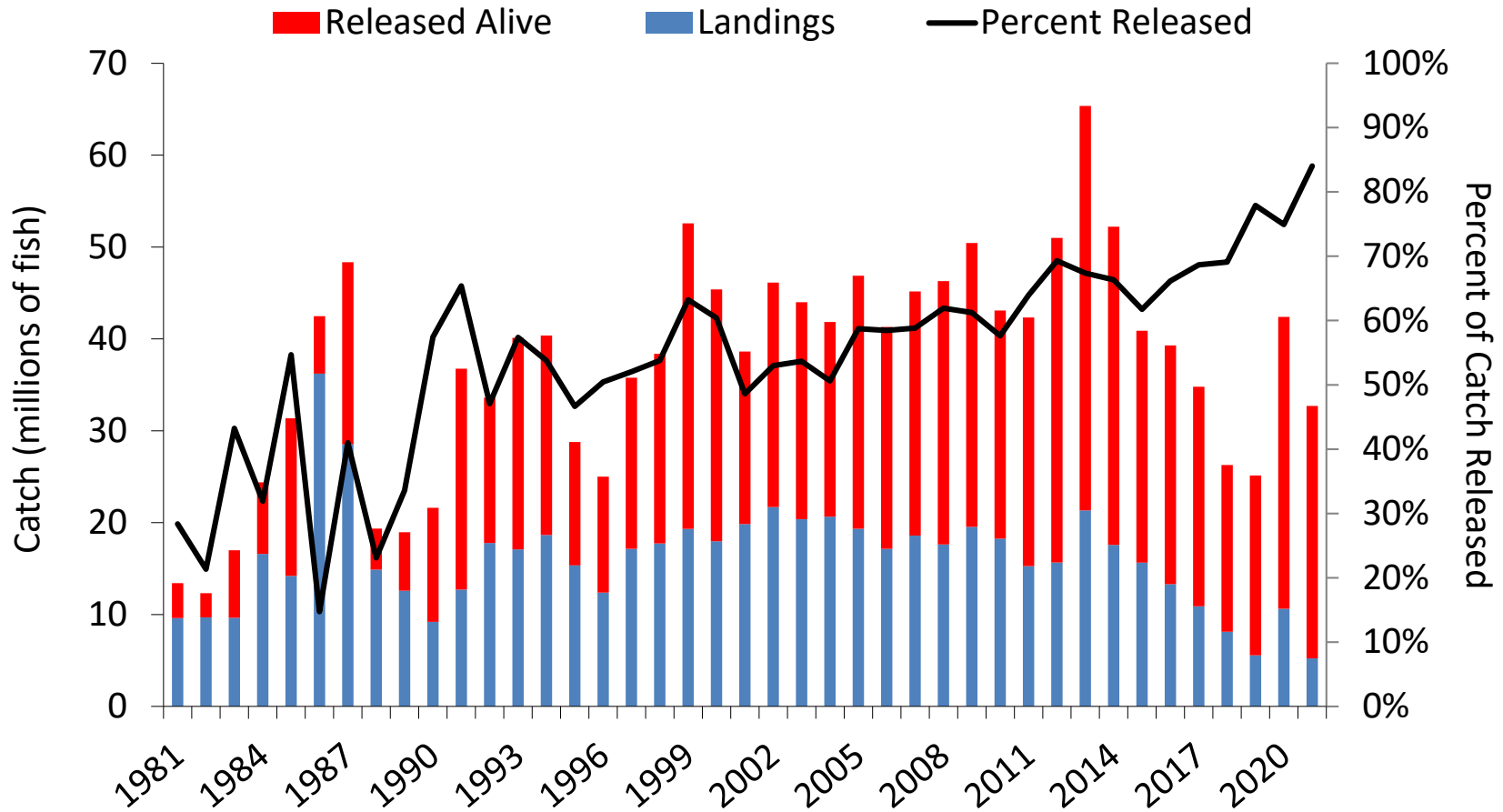


# Atlantic Croaker Landings 1981-2021





# Atlantic Croaker Recreational Landings and Releases

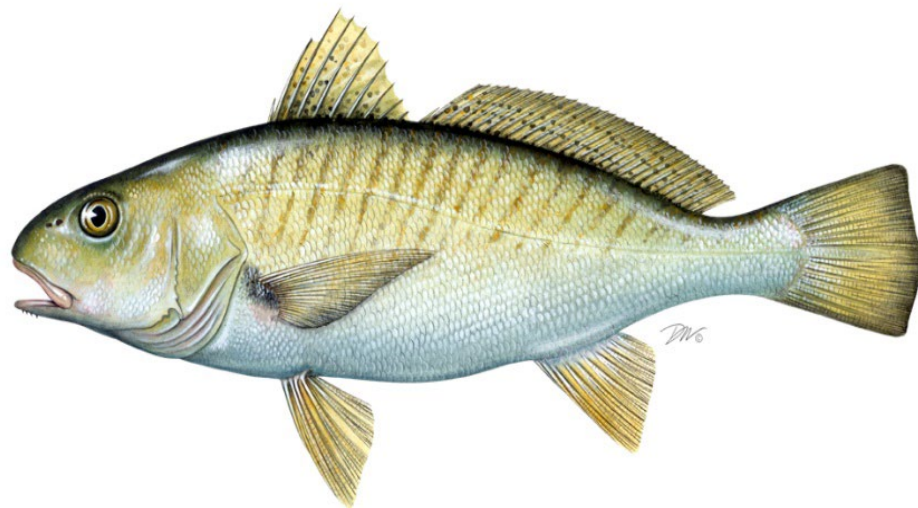
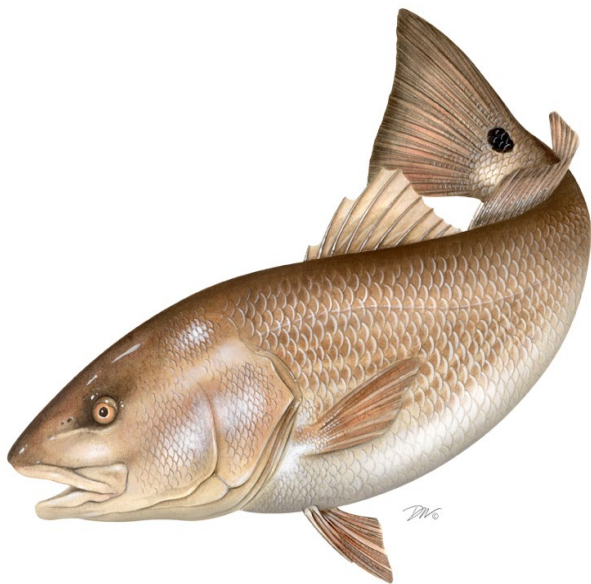


# PRT Recommendations



- No inconsistencies found among states with regard to FMP requirements
- PRT recommends approval of state compliance reports and *de minimis* status for:
  - New Jersey, Delaware, South Carolina, and Georgia commercial fisheries
  - New Jersey and Delaware recreational fisheries
- Additional research/monitoring recommendations found in FMP Review document

# Questions?



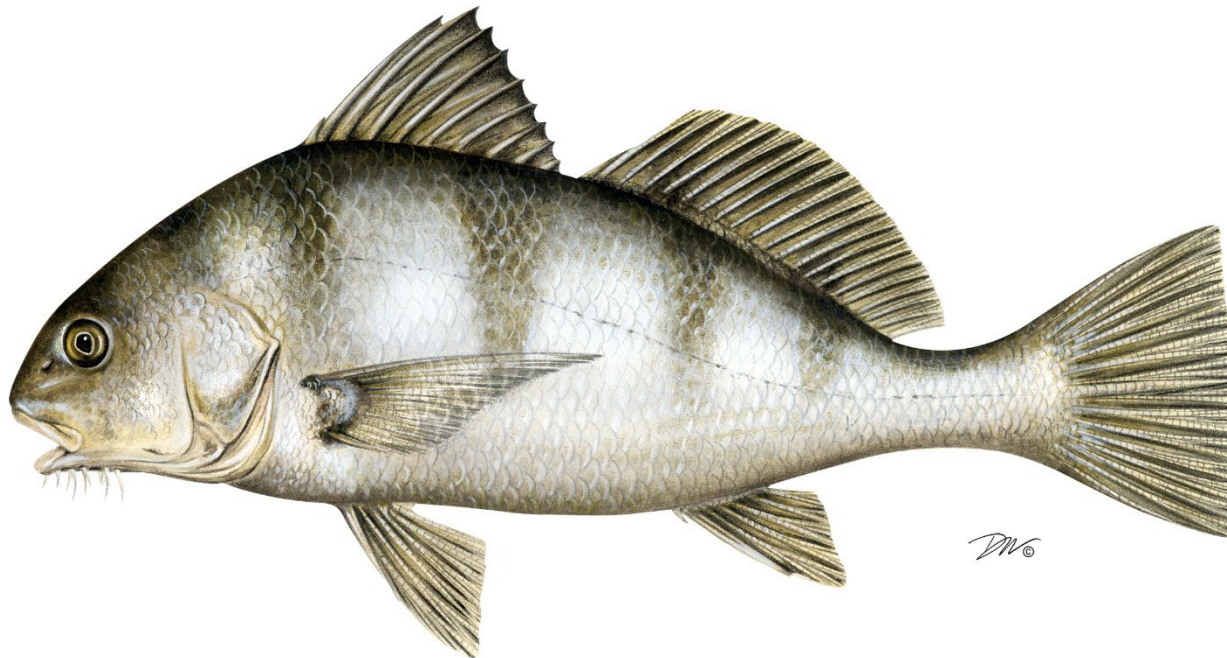
# Board Actions and Next Steps



- Motions on approval/disapproval of FMP reviews, state compliance reports, and *de minimis* requests for red drum and Atlantic croaker.

# 2022 Black Drum Stock Assessment Progress Update

August 4, 2022



# Assessment Workshop



- July 18-21 (Crystal City, VA)
- Review assessment results
- Finalize stock indicator framework
- Select preferred assessment method and reference points
- Final webinar August 23

# Schedule



Milestone	Participants	Purpose	Dates
Data Workshop	TC, SAS	Review Data	December 7-9, 2021
Methods Workshop	TC, SAS	Identify Assessment Methods	February 22-24, 2022
Assessment Workshop	SAS	Review/Finalize Assessment Results	July 18-21, 2022
Peer Review Workshop	SAS	External Review of Assessment	December 2022
Board Review	Board, SAS Chair	Consider Assessment for Management	January/February 2022



# Questions?

