

2022 Traffic Light Analysis for Spot and Atlantic Croaker

Atlantic States Marine Fisheries Commission

Sciaenids Management Board

Summer Meeting

August 4, 2022

Outline

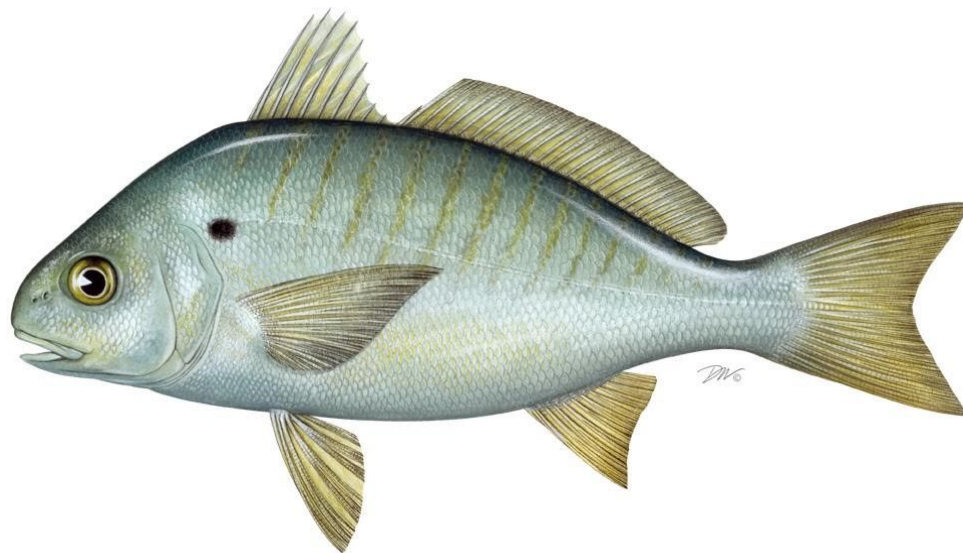


1. Impacts of data unavailability
2. 2022 TLA for Spot
3. 2022 TLA for Atlantic Croaker

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

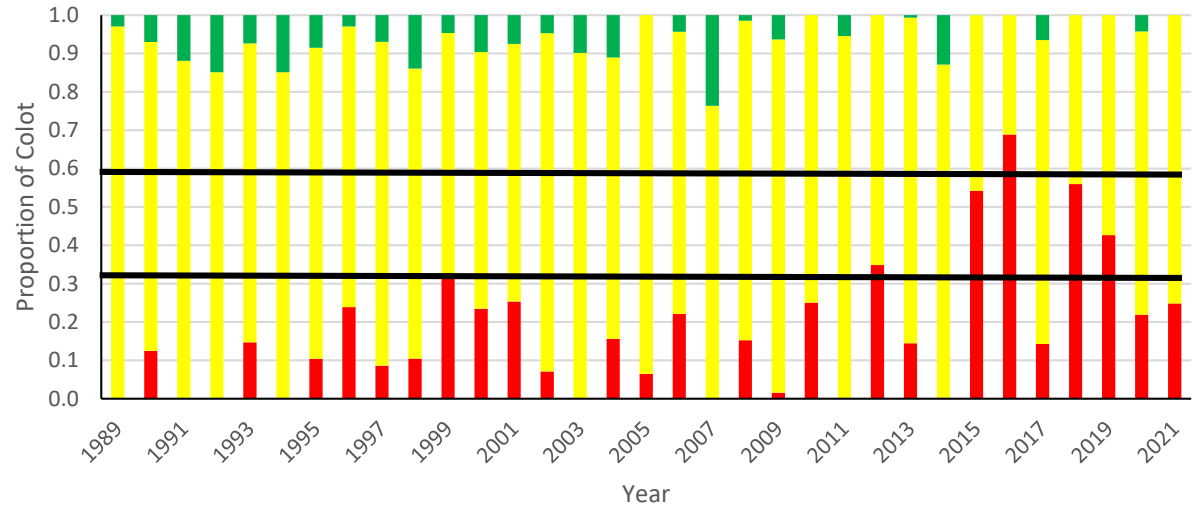


SPOT

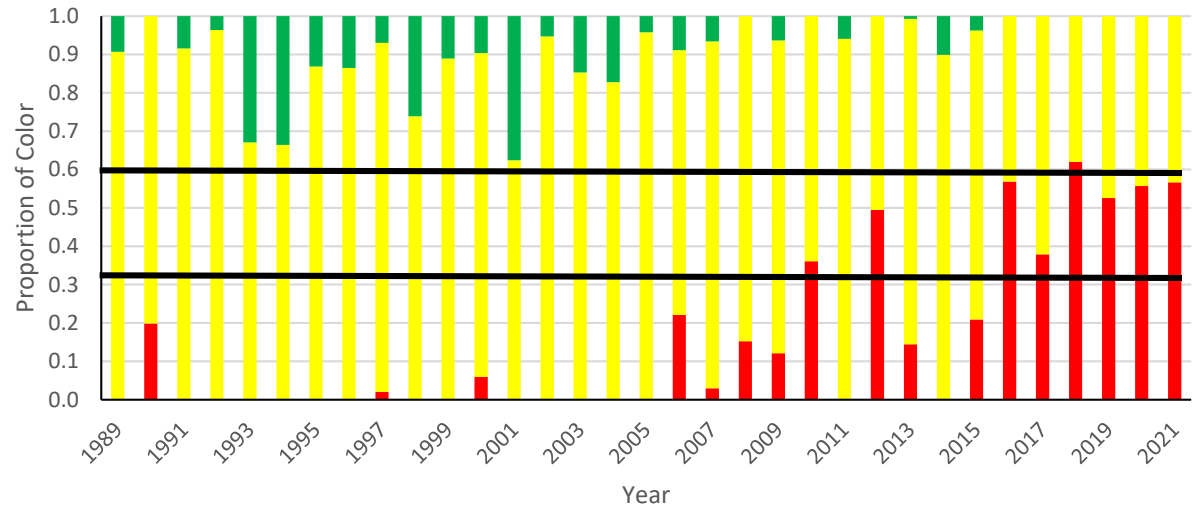
2022 TLA for Spot: Harvest Composite Indices



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



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



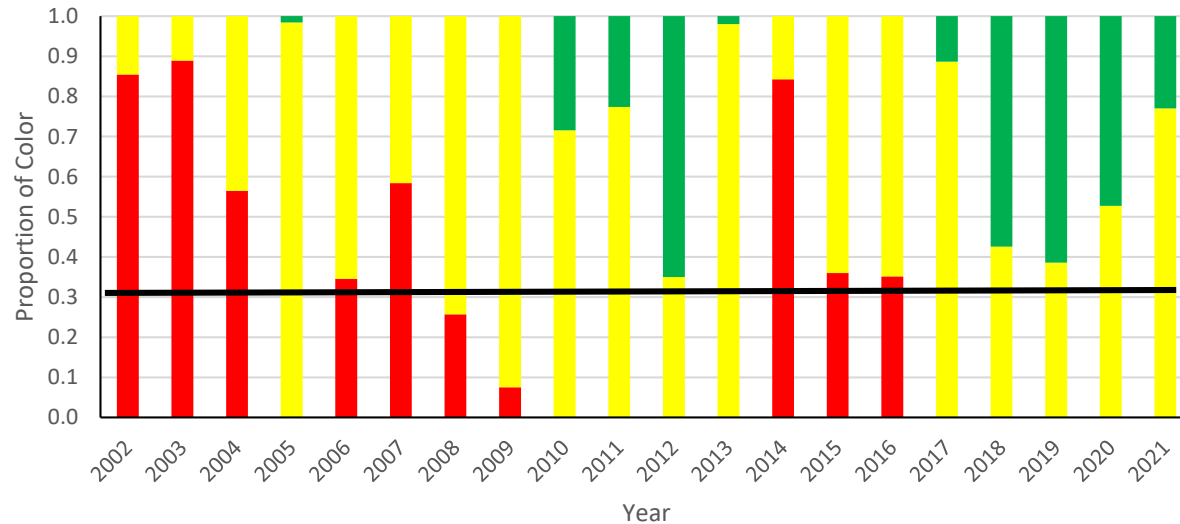
2022 Spot Adult Abundance Composite Index for the Mid-Atlantic



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



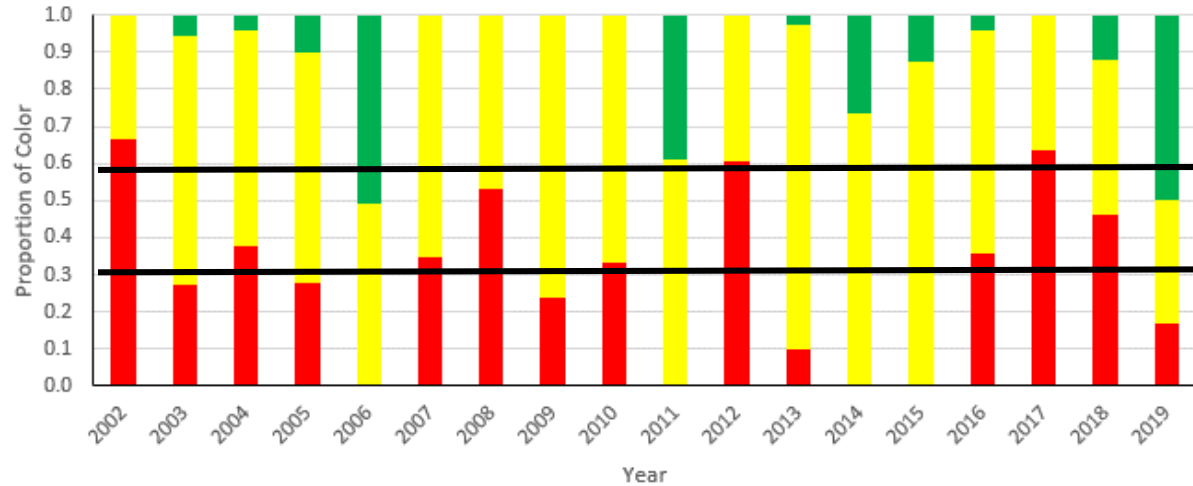
- NEFCS Age 1+ Index
 - 2020 data point is an average of 2018, 2019 and 2021



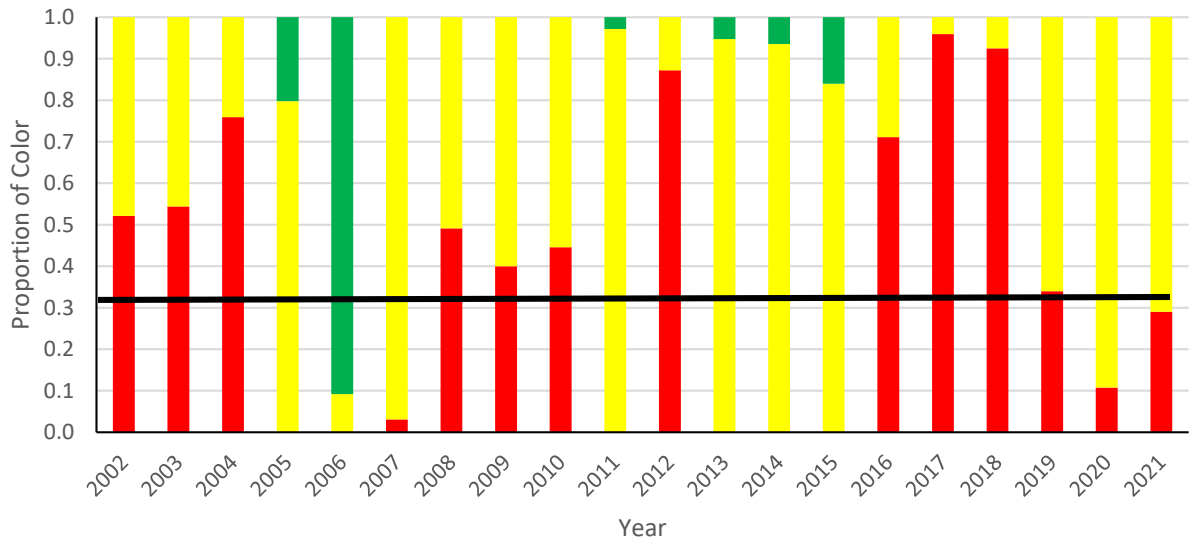
2022 Spot Adult Abundance Composite Index for the South Atlantic



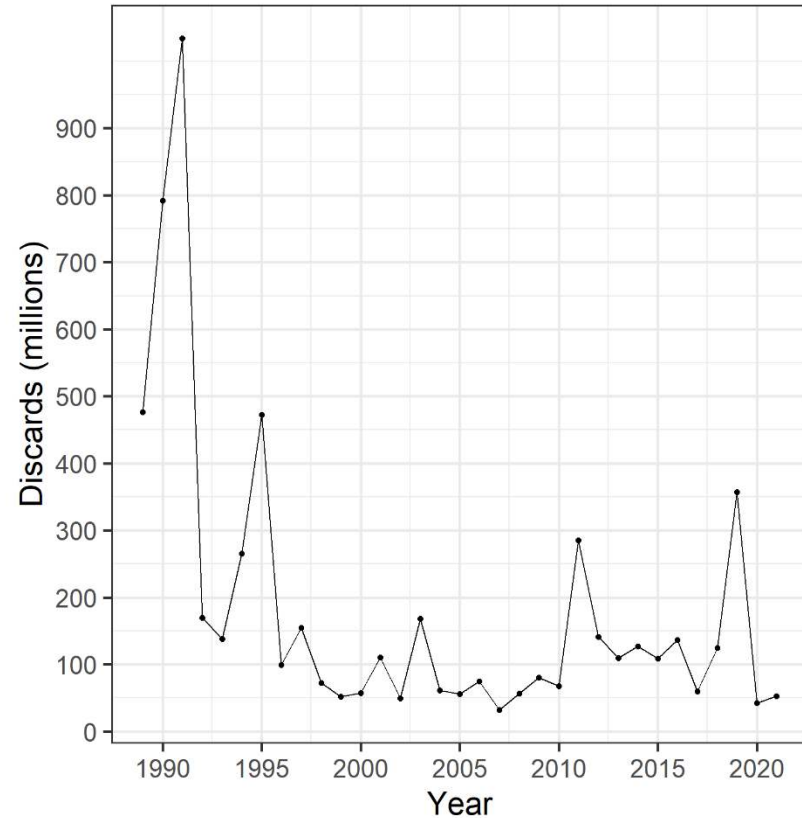
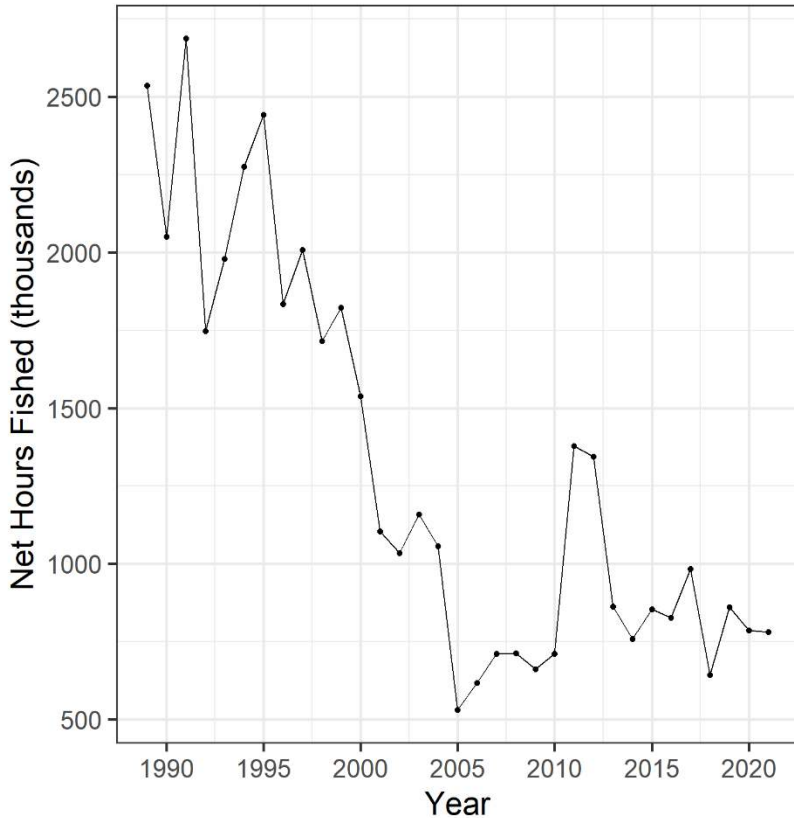
- South Atlantic
 - Status unknown (No SEAMAP since 2019)



- 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

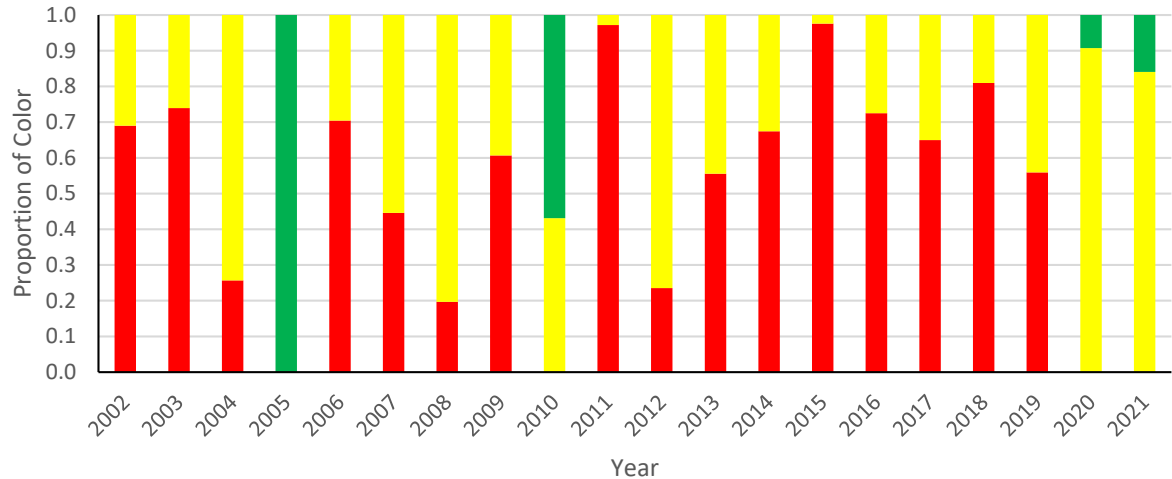


- South Atlantic Shrimp Trawl Fishery
 - Total net hours fished (left) and discards of spot (right)

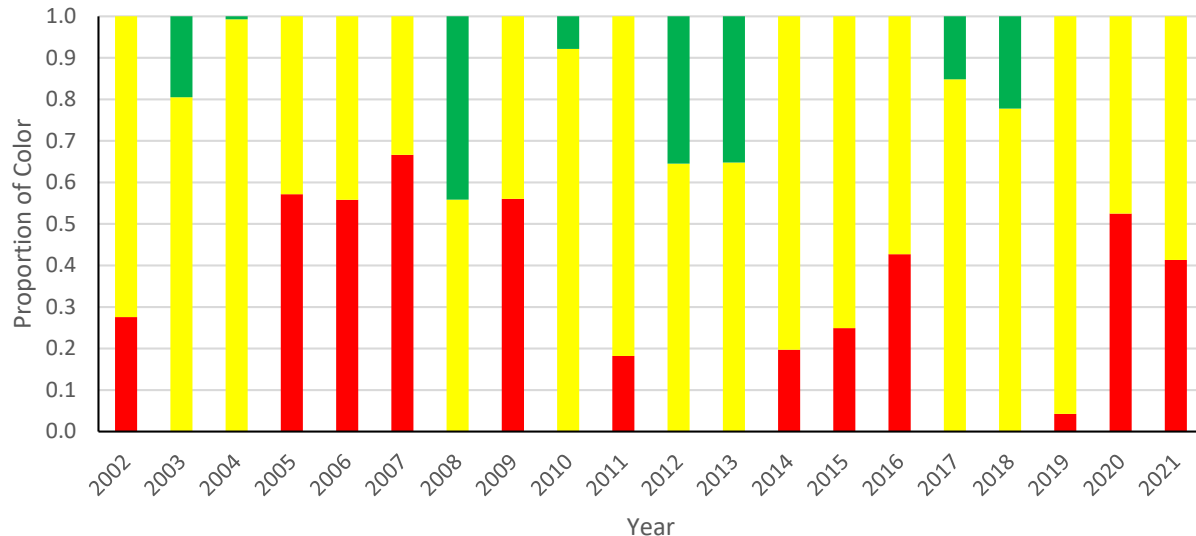
2022 TLA for Spot: Juvenile indices



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

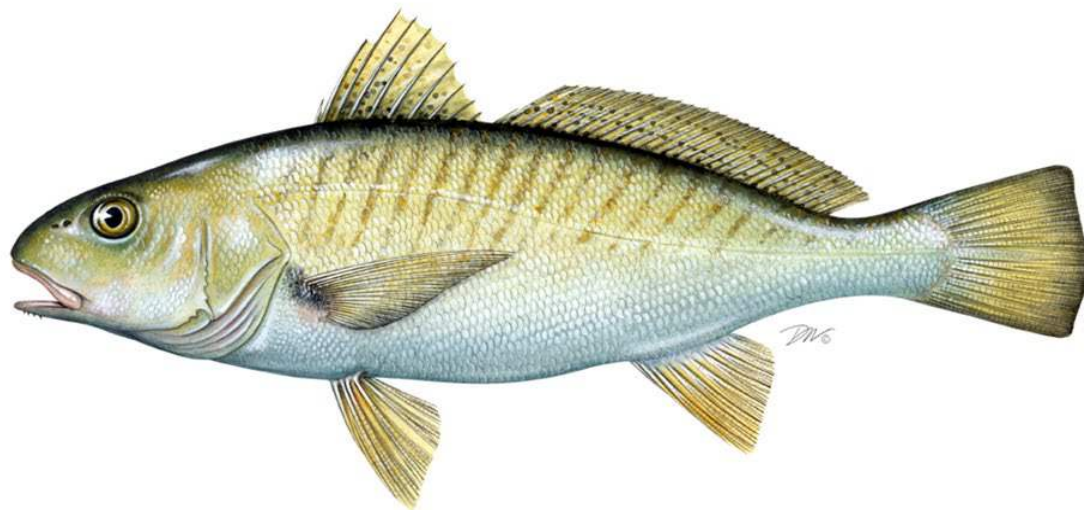
2022 Spot TLA: TC Management Recommendation



- 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?



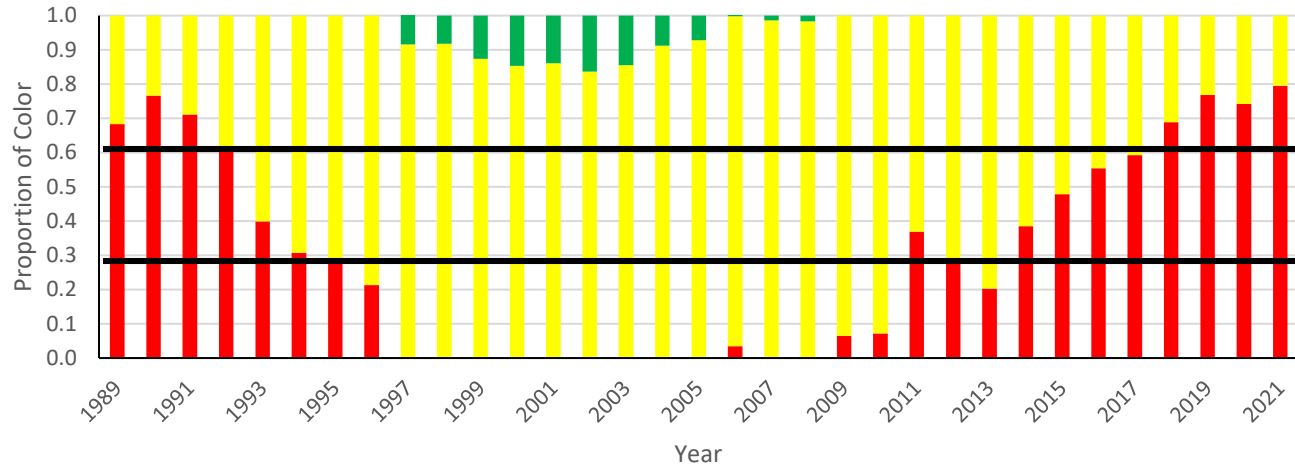


ATLANTIC CROAKER

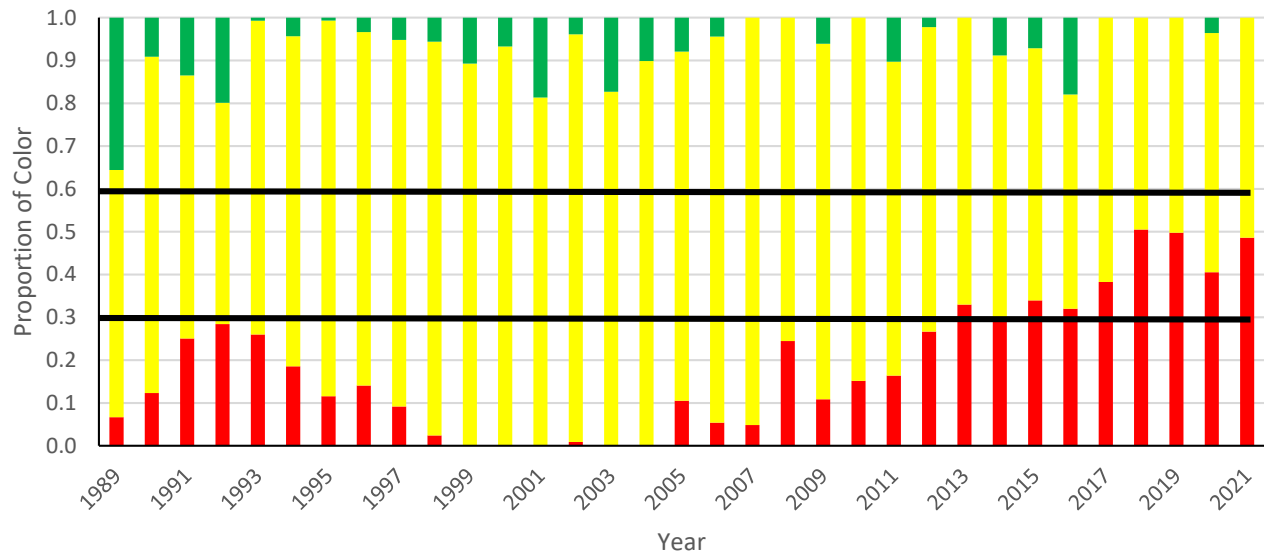
2022 TLA for Atlantic Croaker: Harvest Composite Indices



- Mid-Atlantic harvest composite



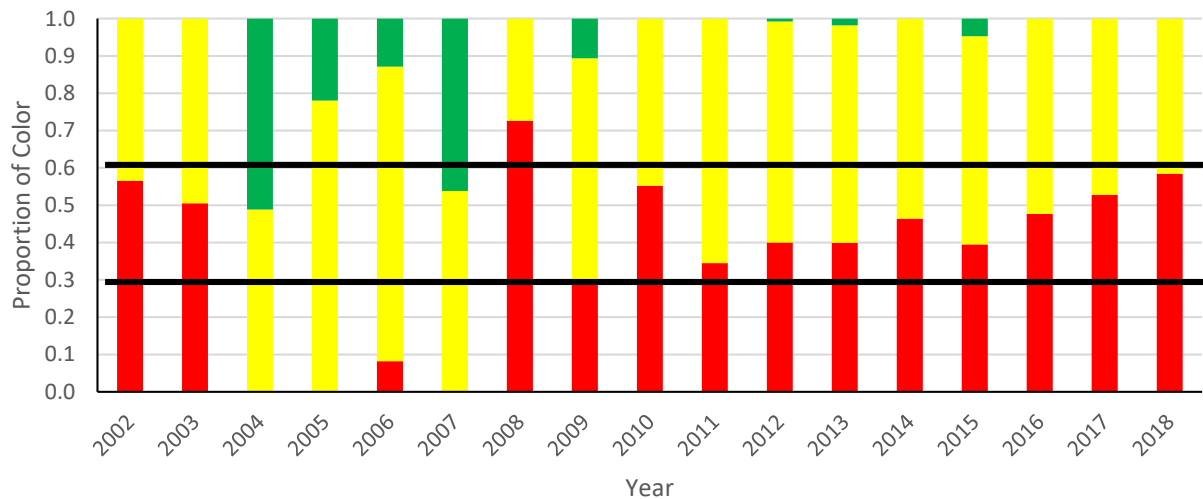
- South Atlantic harvest composite



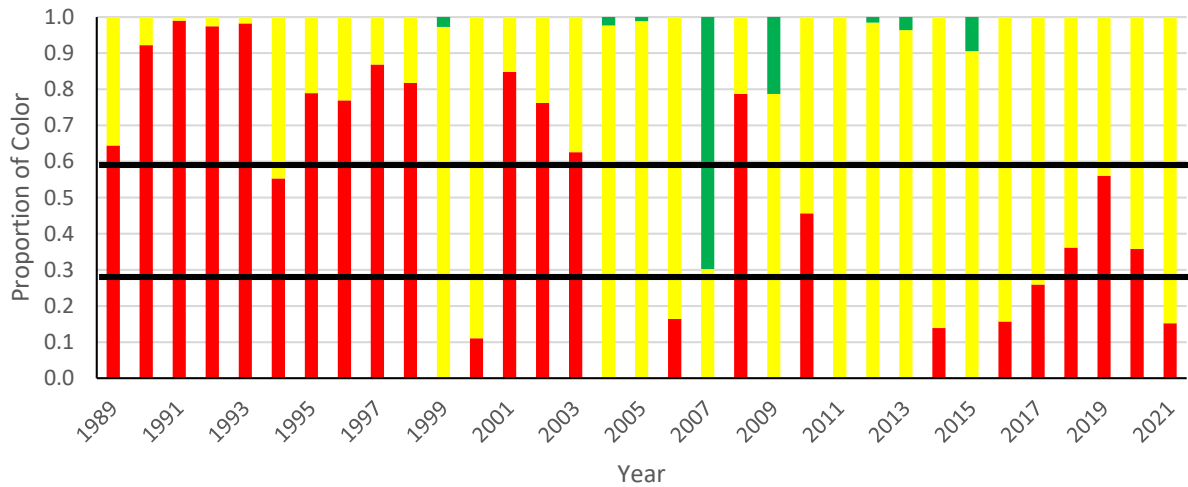
2022 TLA for Atlantic Croaker: Adult Abundance Composite Indices



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



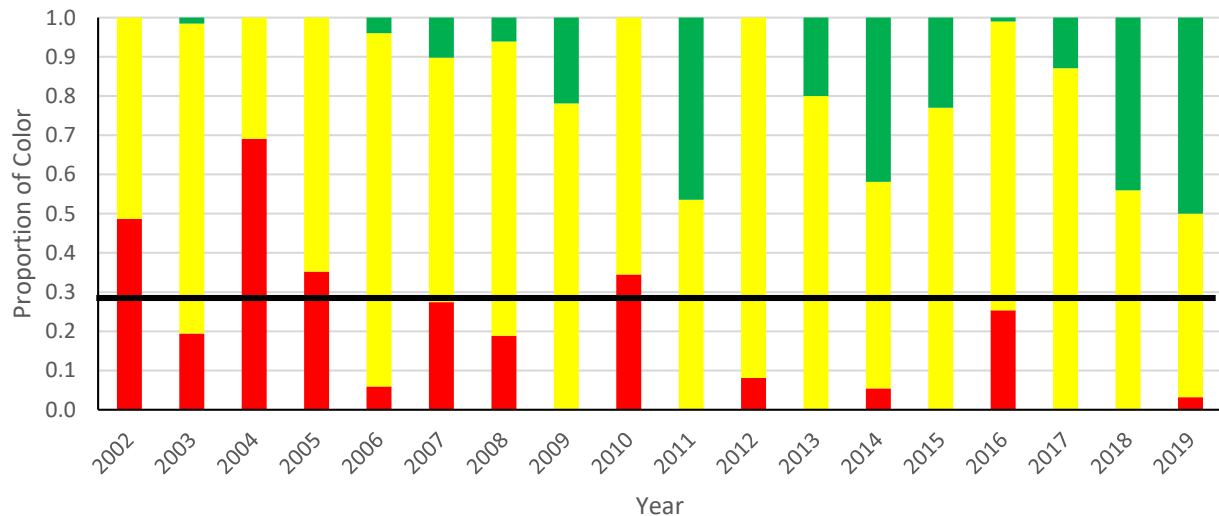
- NEFSC



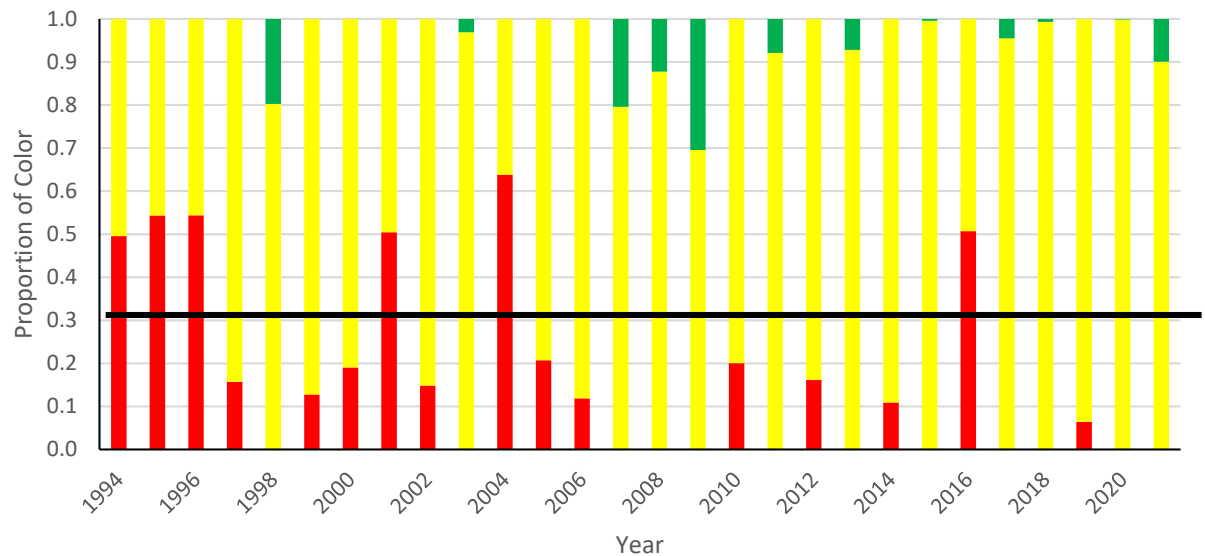
2022 TLA for Atlantic Croaker: Adult Abundance Composite Indices



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



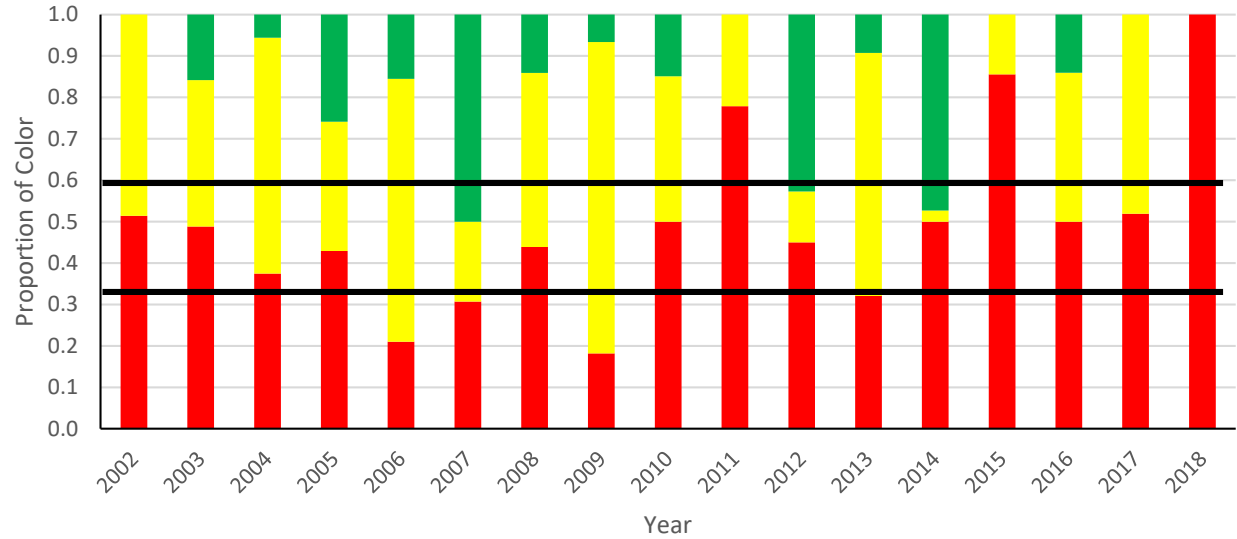
- SC Trammel



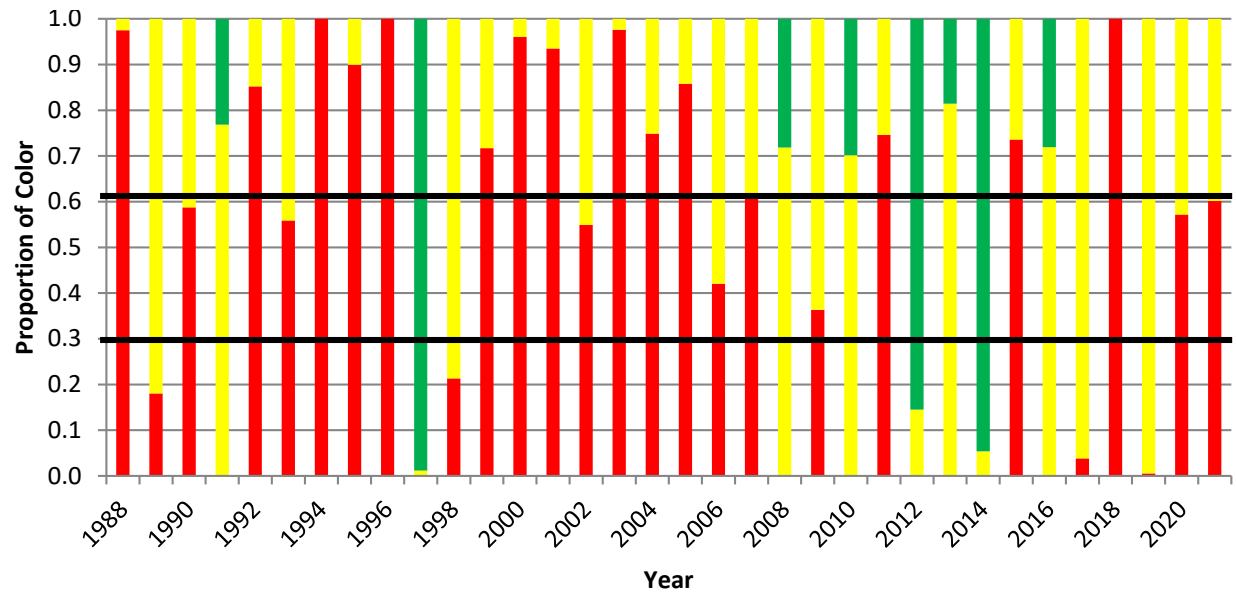
2022 TLA for Atlantic Croaker: Juvenile indices



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



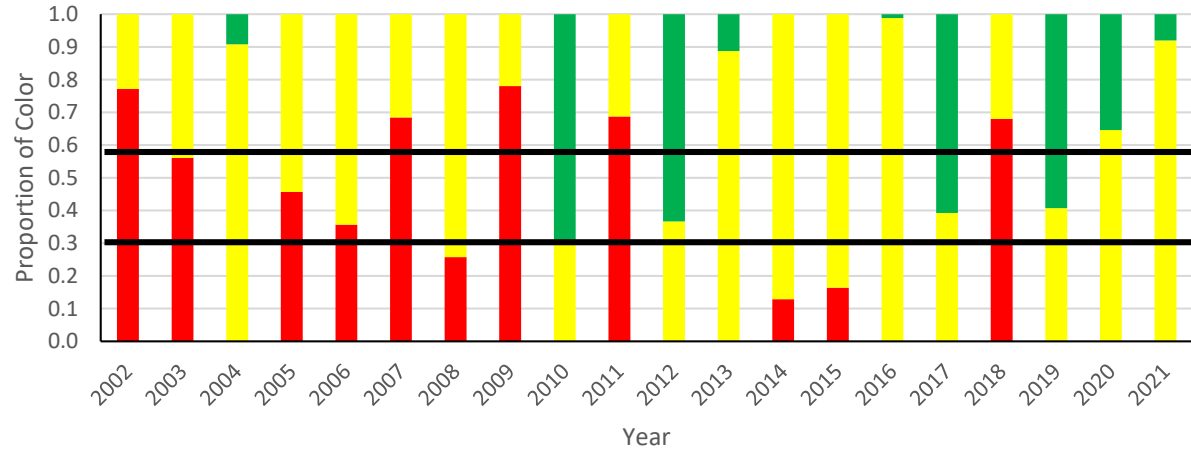
- VIMS



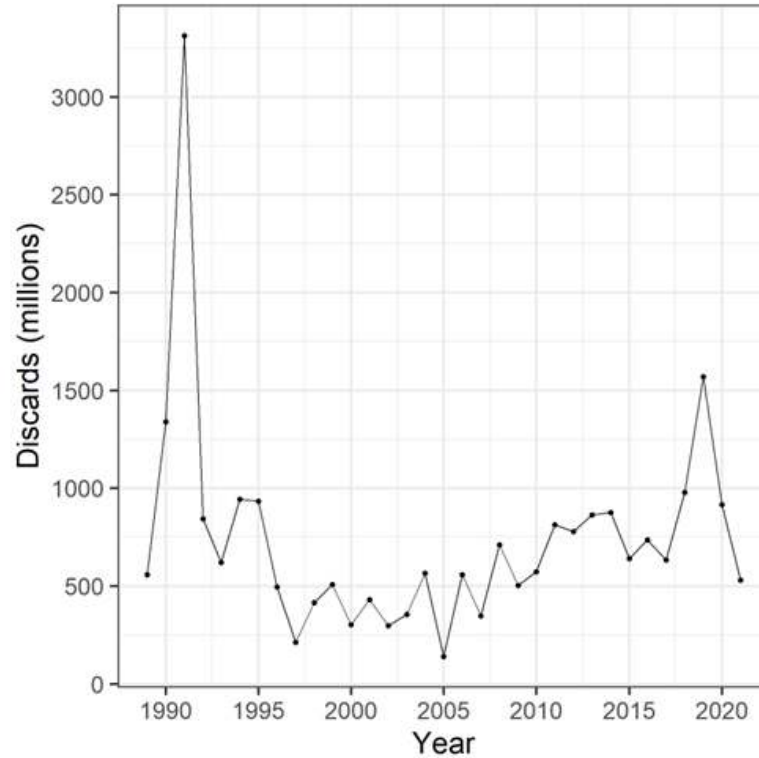
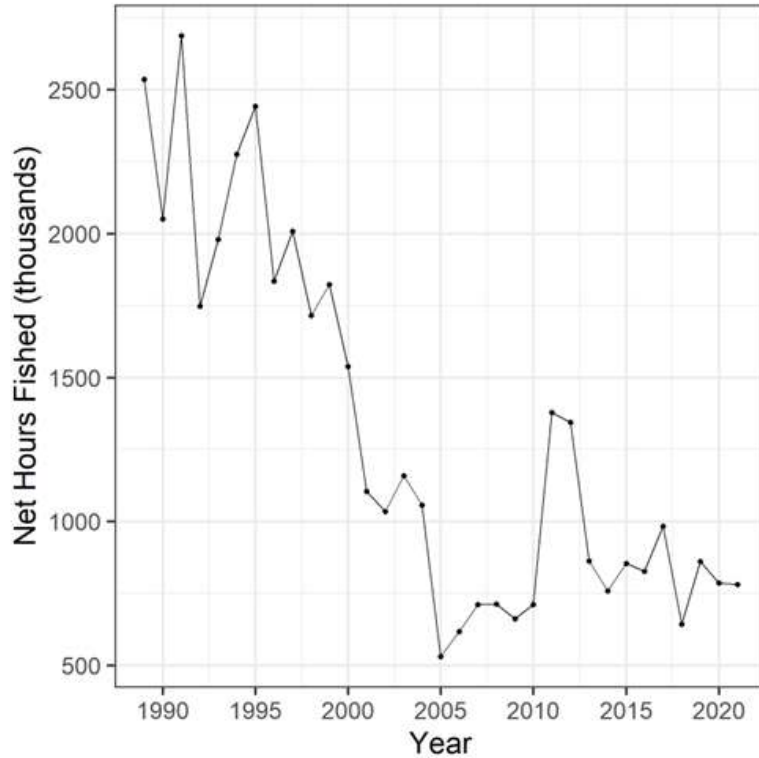
2022 TLA for Atlantic Croaker: Juvenile indices



- South Atlantic juvenile abundance



2022 TLA for Atlantic Croaker: Shrimp Trawl



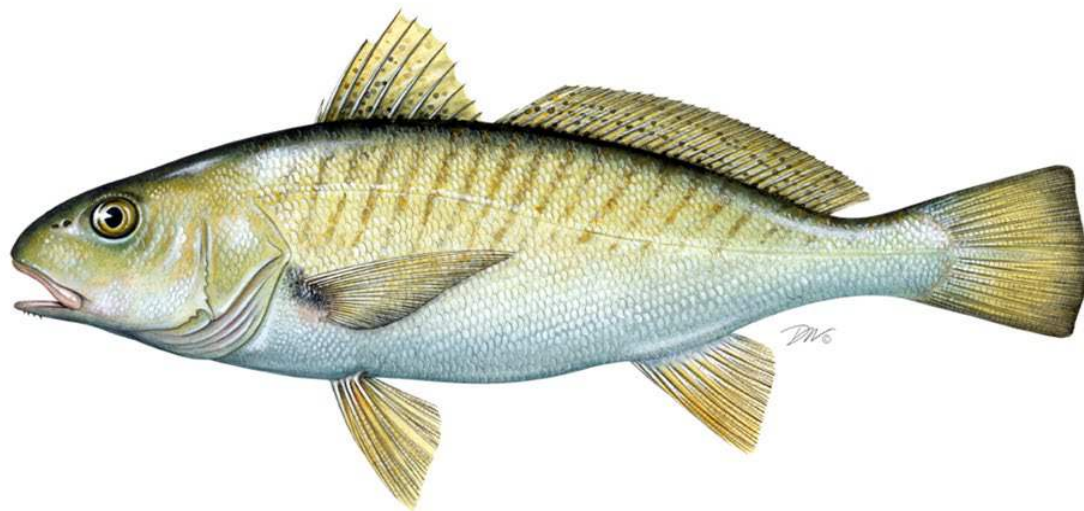
- South Atlantic Shrimp Trawl Fishery
 - Total net hours fished (left) and discards of croaker(right)

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?

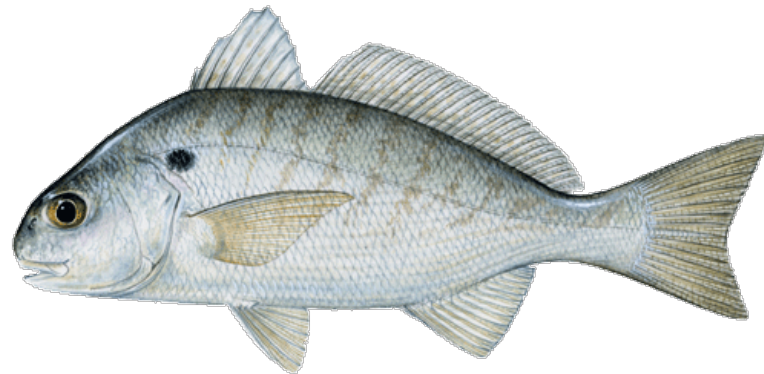


Developing Chesapeake Bay-specific abundance estimates for spot

August 4, 2022

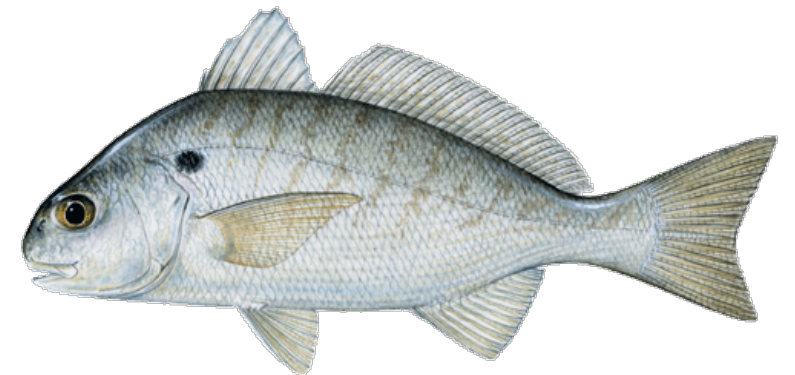
Mike Wilberg - UMCES

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

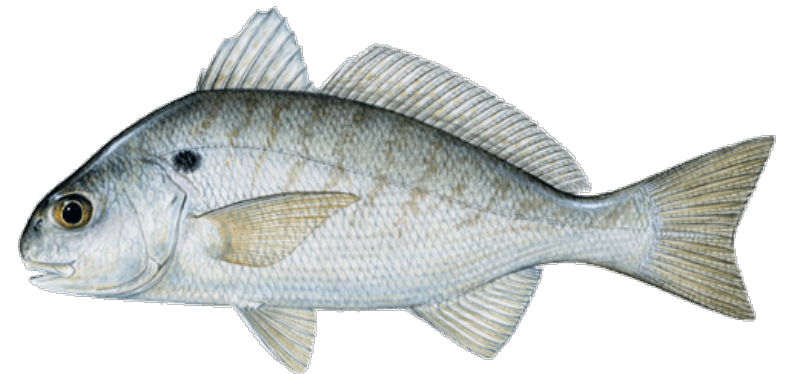


Objectives

- 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

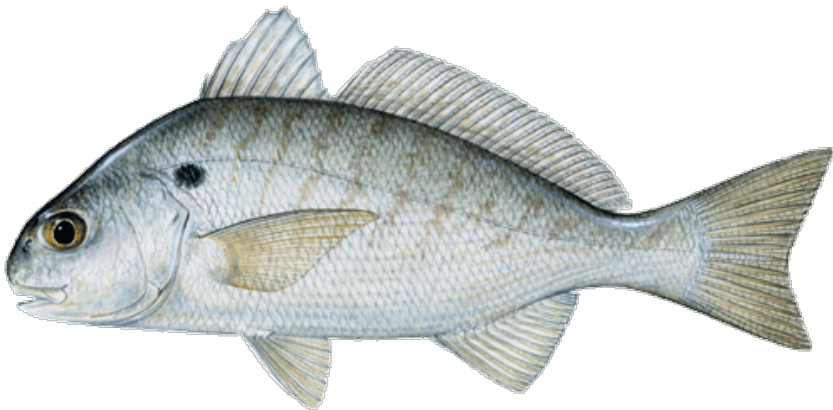
Spot

- 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

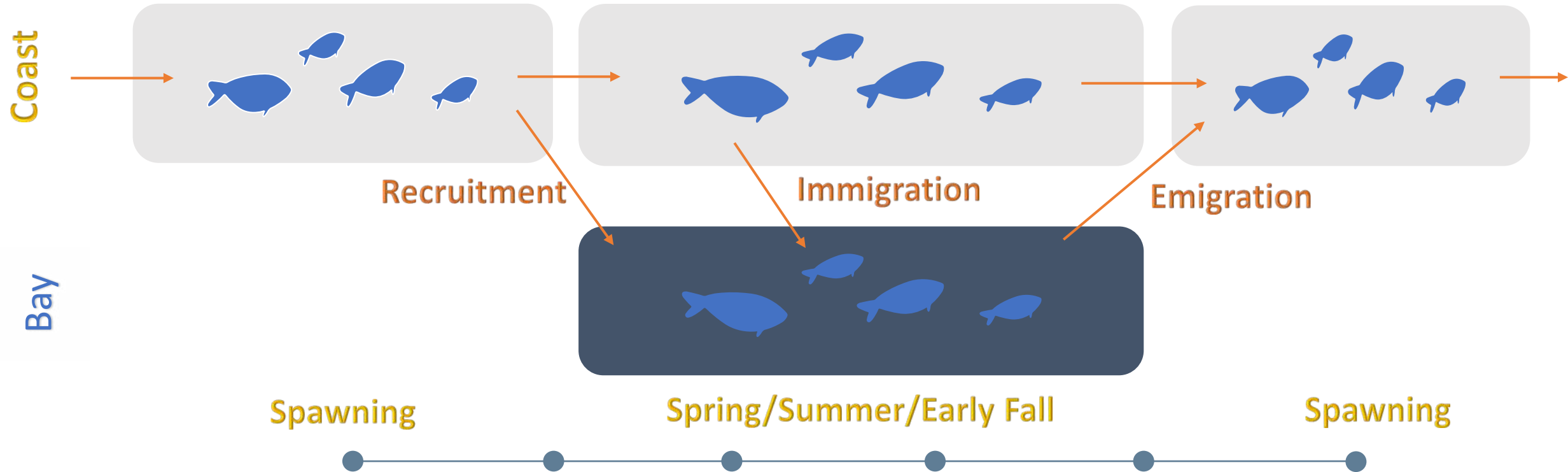


Model structure

- 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



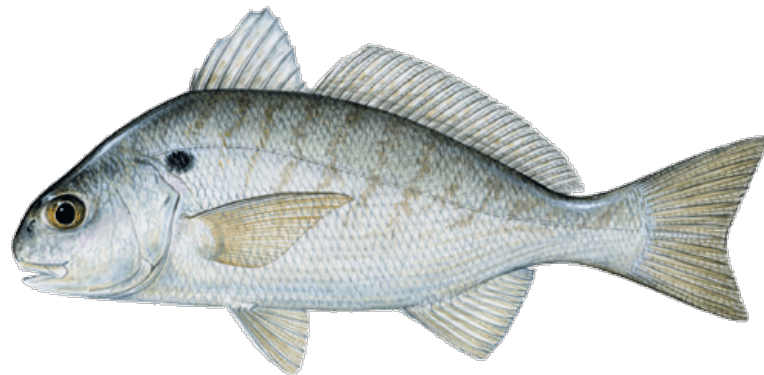
Data sources

- 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

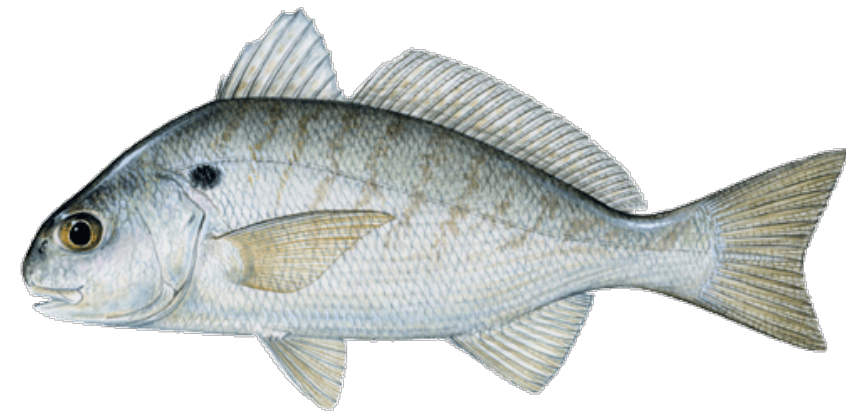


Estimated parameters

- 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

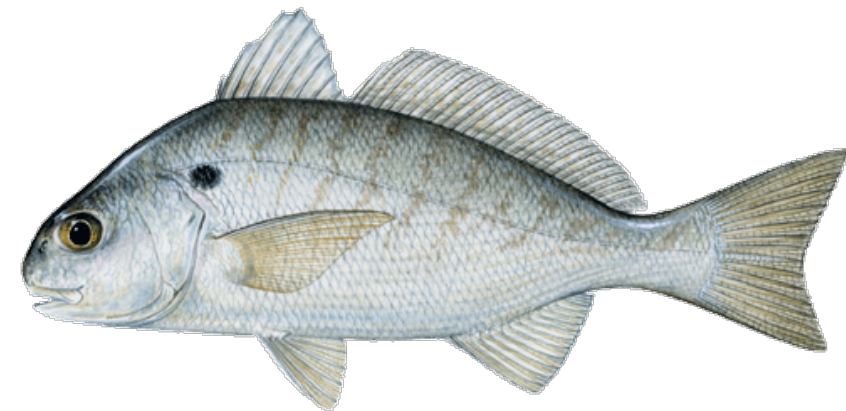
- Submit data requests
- Begin developing age-structured spatial model (initially will be similar to the striped bass model)



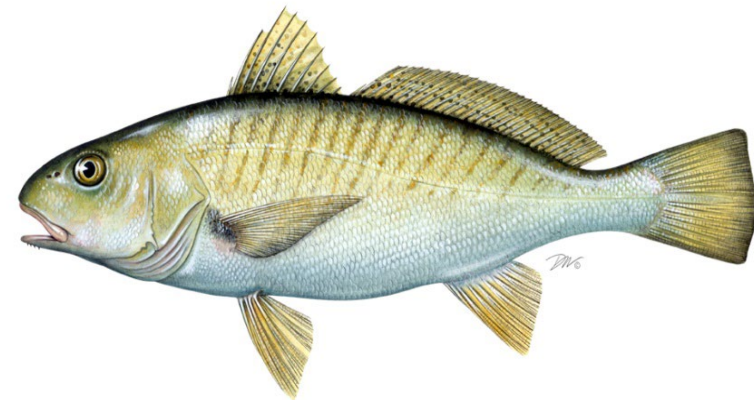
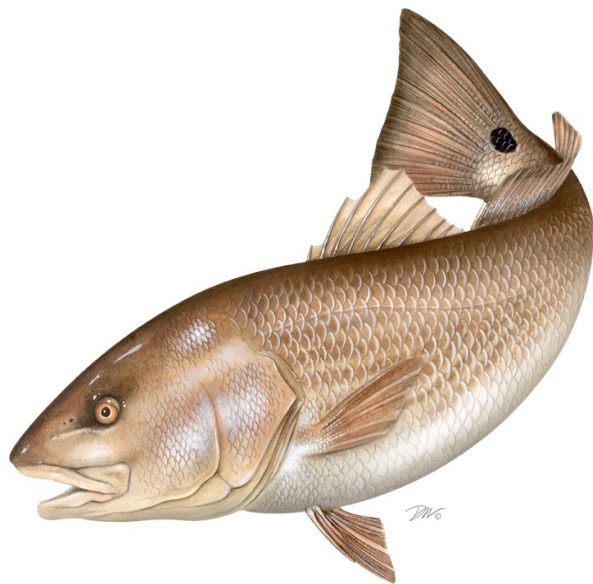
Acknowledgments

- Mandy Bromilow (NCBO)
- Tracey Bauer (ASFMC)
- Spot TC

- Funding
 - NOAA Chesapeake Bay Office
 - VIMS
 - CBL



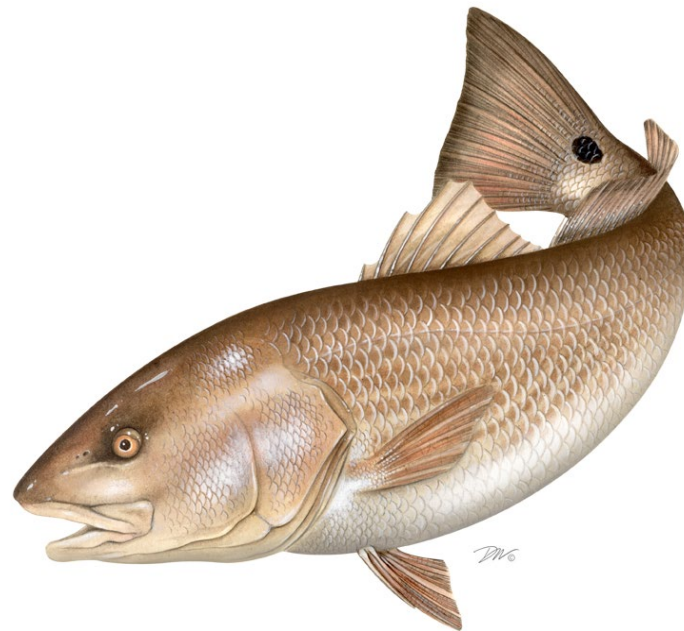
Red Drum and Atlantic Croaker Fishery Management Plan Review



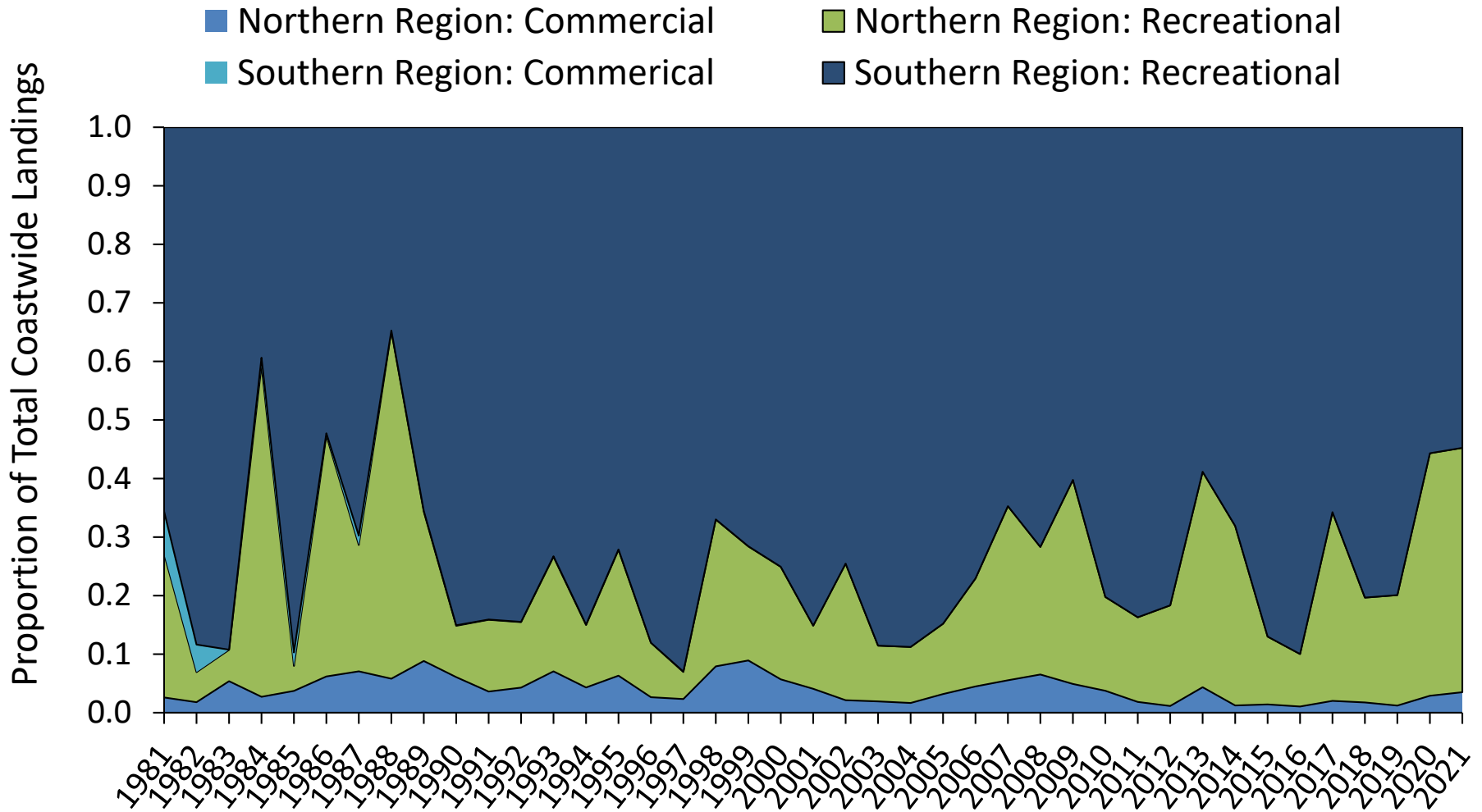
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August 4, 2022

Red Drum

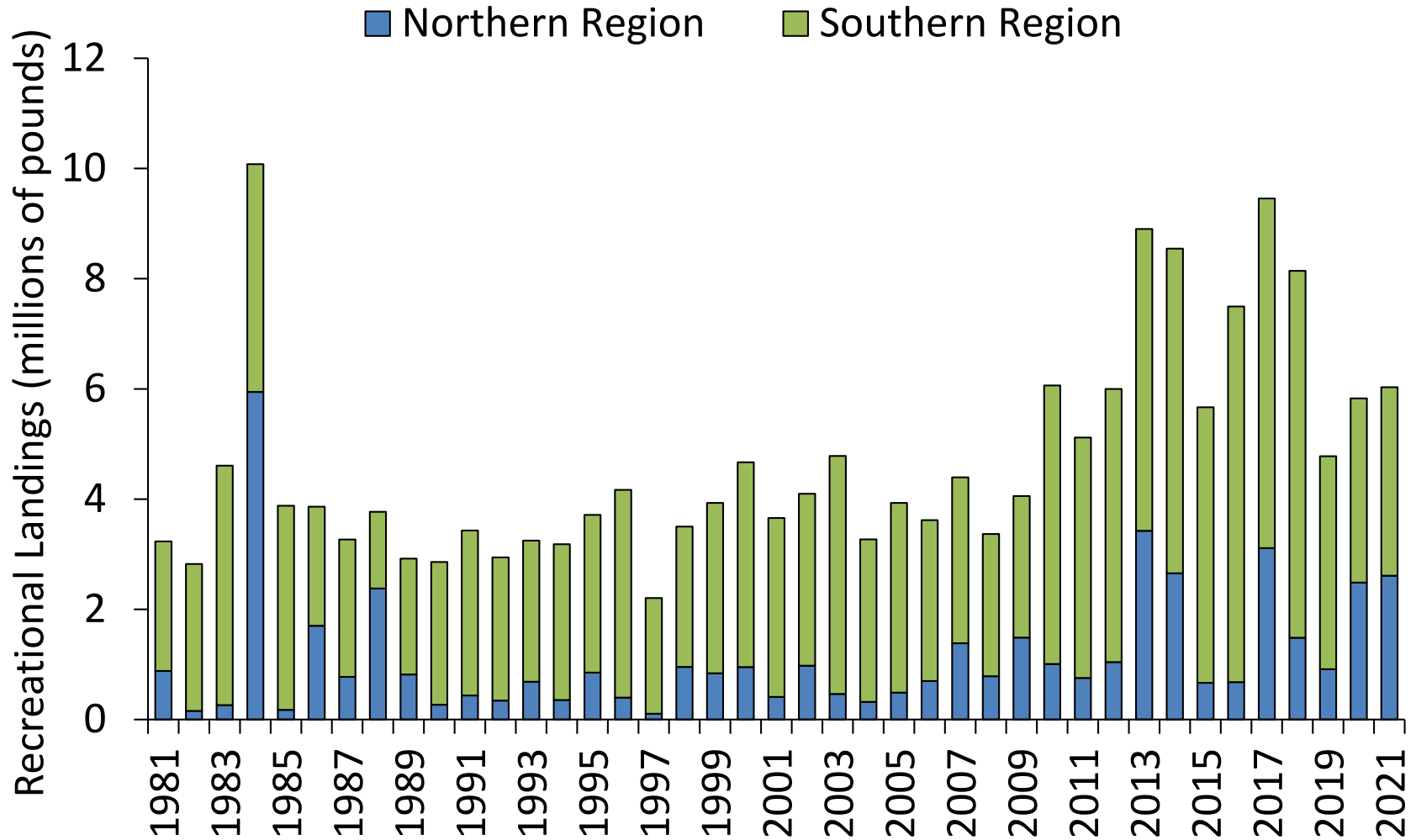
Fishery Management Plan Review



Status of the Fishery – Total Landings



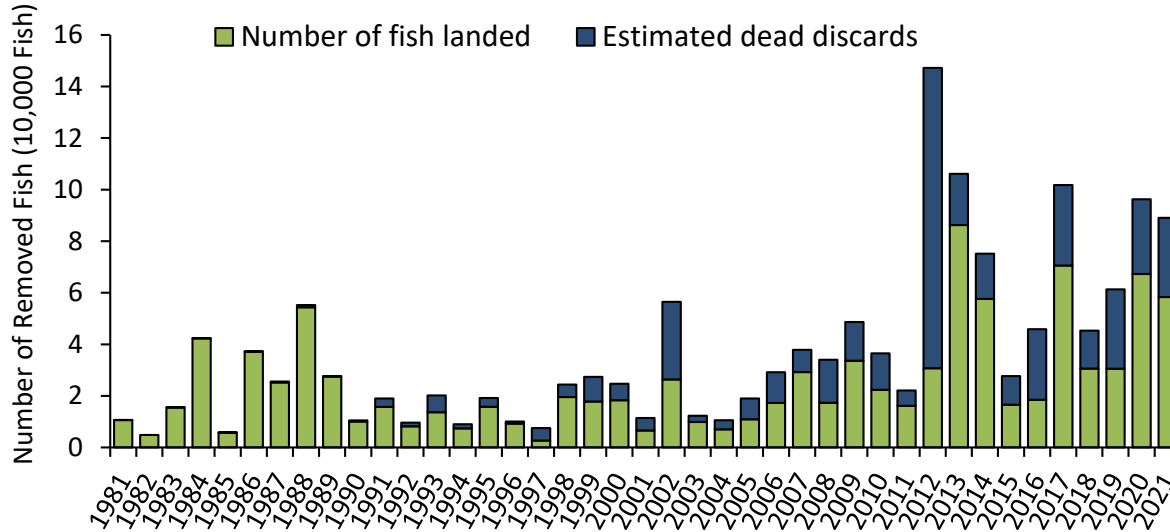
Status of the Fishery - Recreational Landings



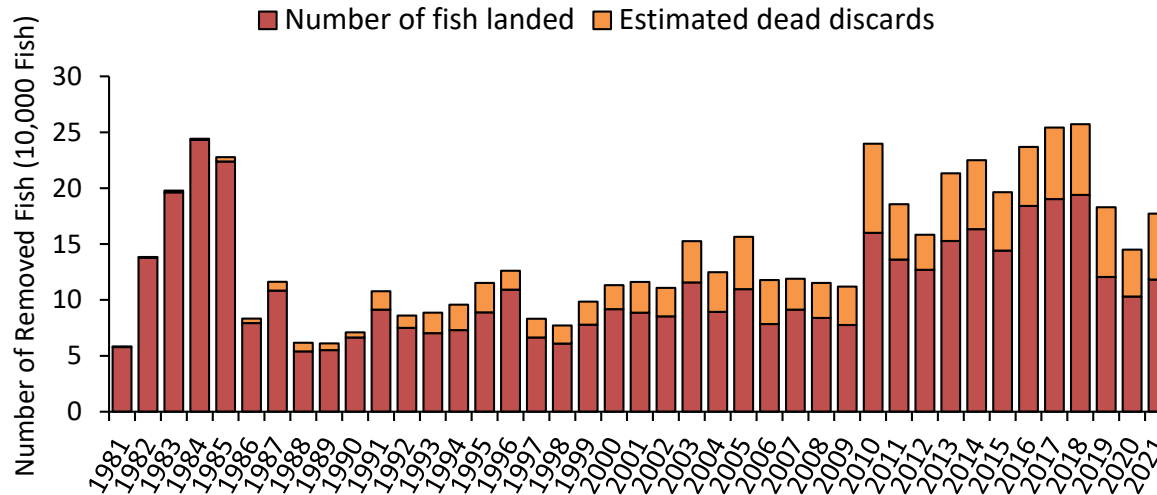
Status of the Fishery - Recreational Removals by Region



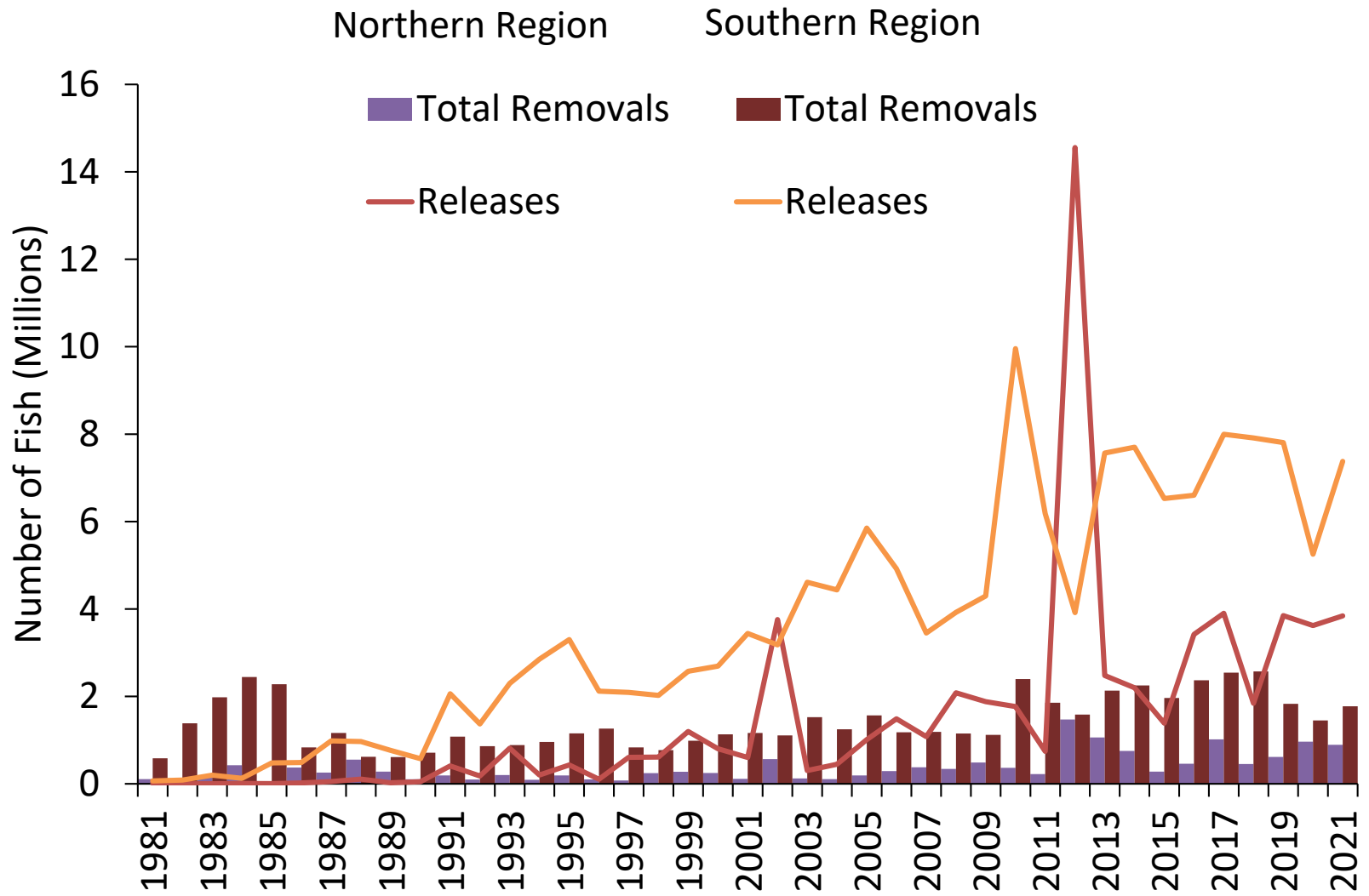
Northern Region



Southern Region



Status of the Fishery – Recreational Removals and Releases

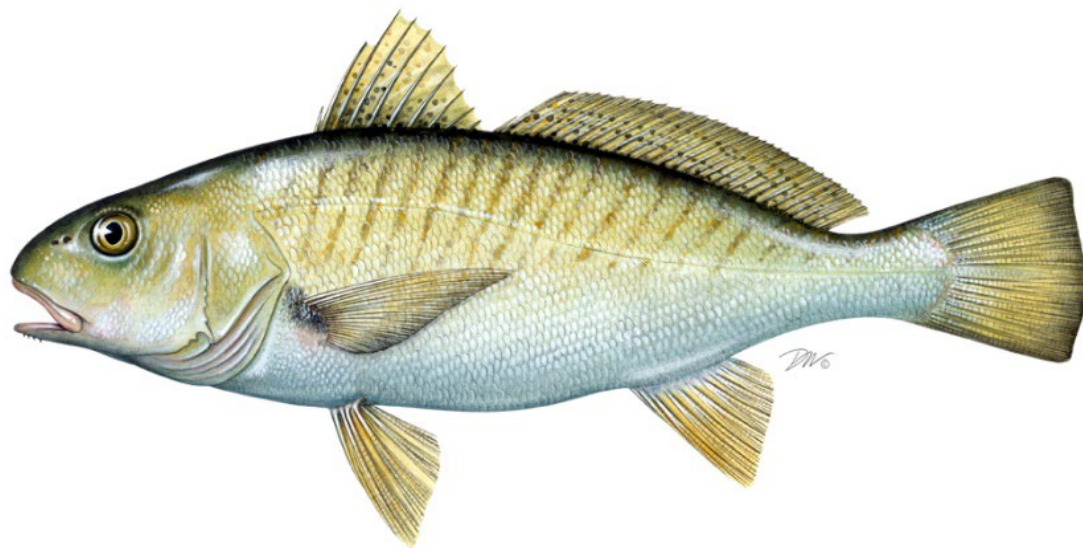


PRT Recommendations

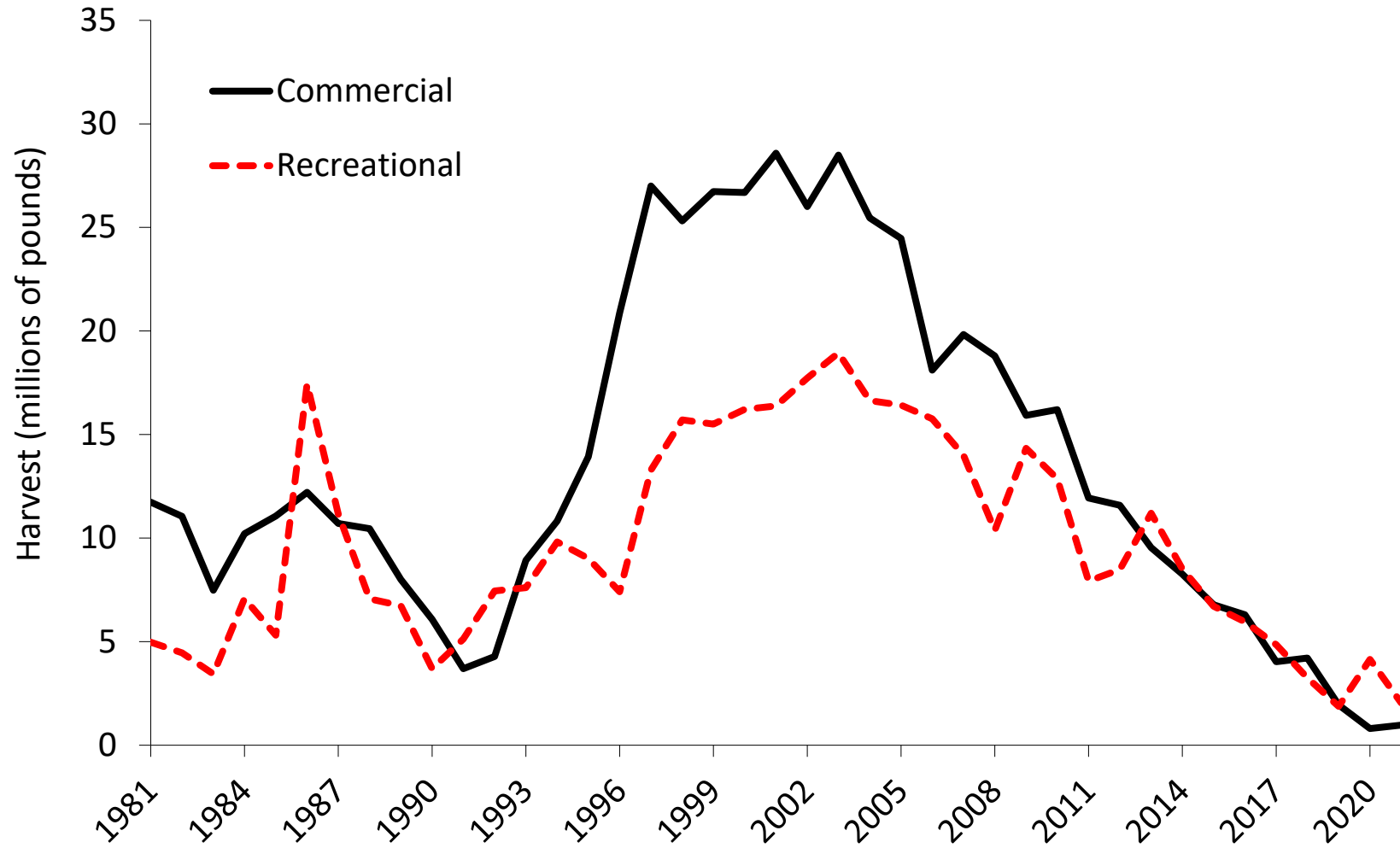


- Found no inconsistencies from the FMP
- PRT recommends the approval of state compliance reports and *de minimis* status for New Jersey and Delaware
- Additional research/monitoring recommendations found in FMP Review document and Red Drum Simulation Assessment and Peer Review Report document

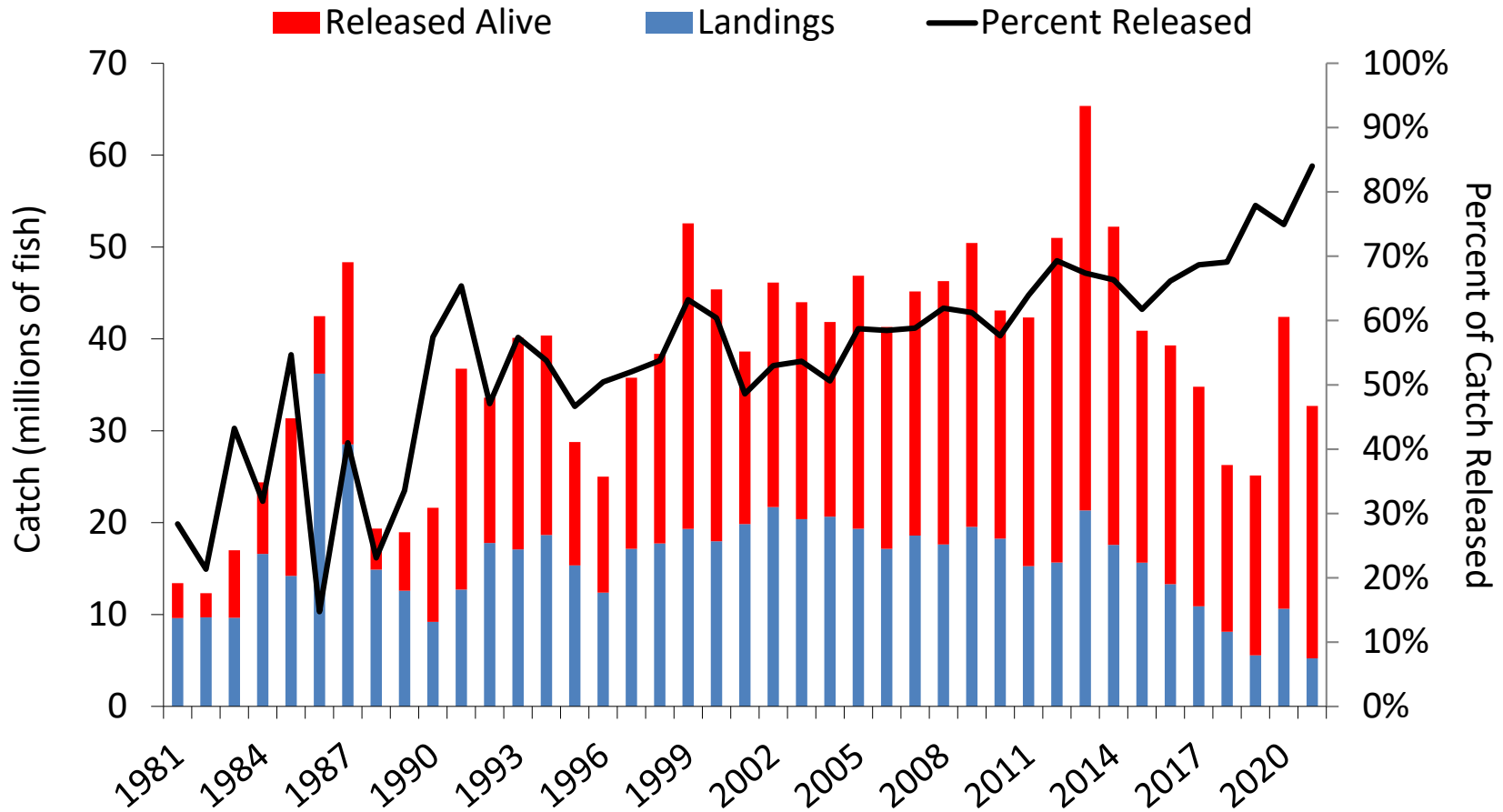
Atlantic Croaker Fishery Management Plan Review



Atlantic Croaker Landings 1981-2021



Atlantic Croaker Recreational Landings and Releases

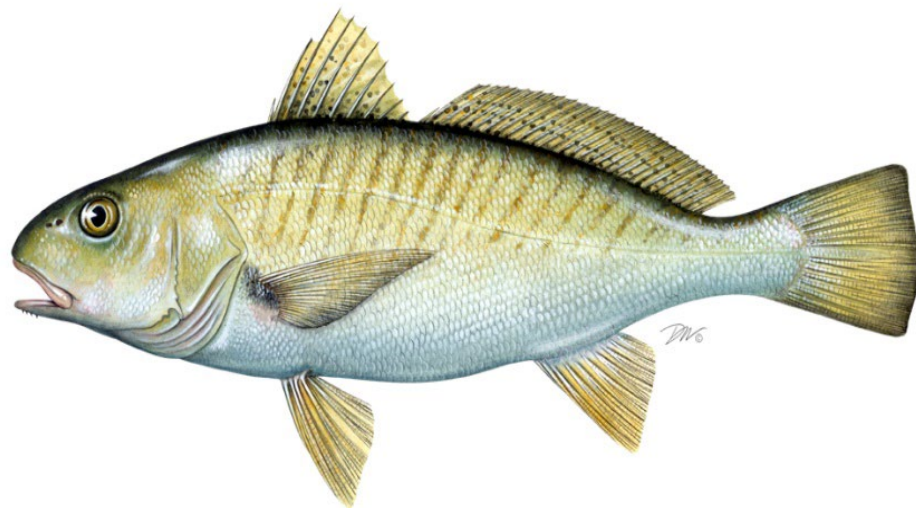
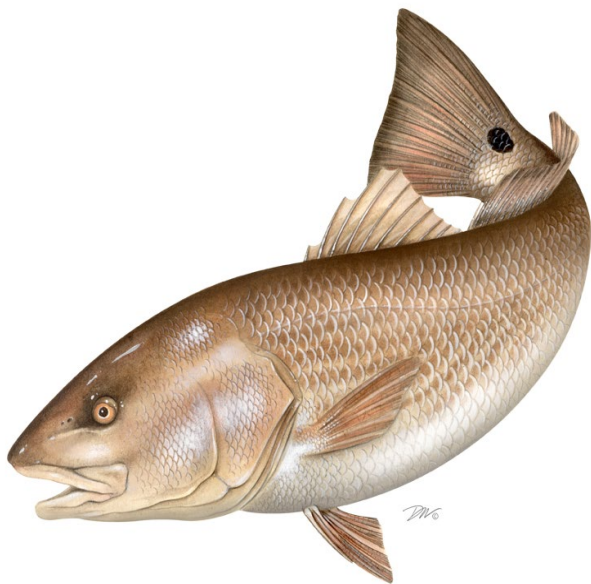


PRT Recommendations



- 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?



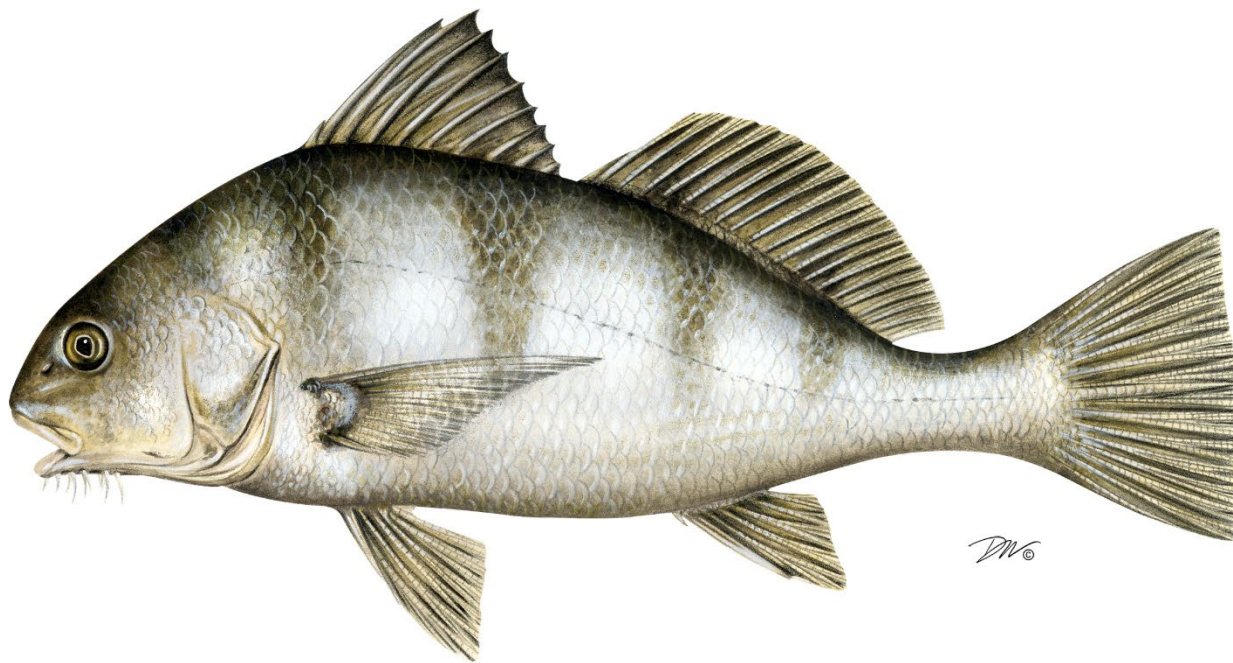
Board Actions and Next Steps



- 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?

