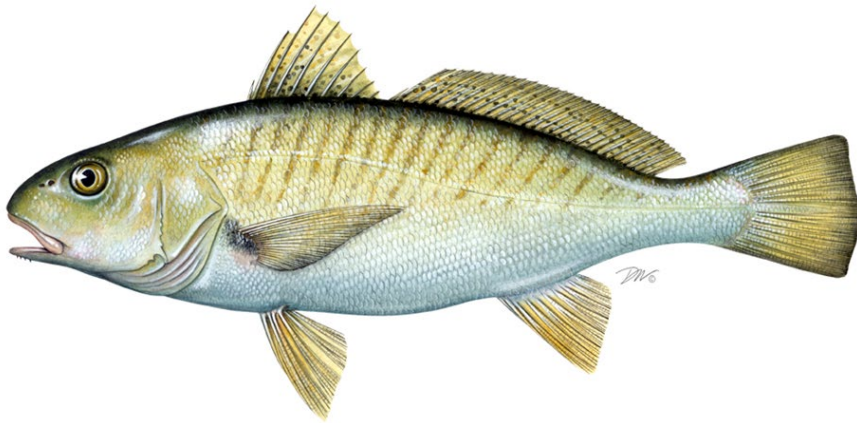


ATLANTIC STATES MARINE FISHERIES COMMISSION

2024 TRAFFIC LIGHT ANALYSIS REPORT FOR ATLANTIC CROAKER (*Micropogonias undulatus*)

2023 Fishing Year



Prepared by the Technical Committee
and Approved by the Sciaenids Management Board
August 2024



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

EXECUTIVE SUMMARY

Background

The purpose of this report is to evaluate the current status of Atlantic croaker using the annual Traffic Light Analysis (TLA). Annually, the Technical Committee (TC) conducts a TLA to evaluate a Mid-Atlantic and a South Atlantic harvest metric, combining commercial and recreational landings in the region. The TC also evaluates a Mid-Atlantic (NJ-VA) and South Atlantic (NC-FL) abundance metric, combining indices of abundance from fishery-independent surveys in each region. Each metric is evaluated using a color proportion of green, yellow, or red calculated for each year based on comparing the respective year to a 2002-2012 reference period. Addendum III defined two thresholds, 30% (proportion=0.30) red as a threshold for moderate concern and 60% (proportion=0.60) red as a threshold for significant concern to the fishery. Management action is triggered according to the 30% red and 60% red thresholds if both the adult abundance and harvest thresholds are exceeded for either region in any three of the four terminal years.

2023 Harvest Metrics

The Mid-Atlantic harvest metric has exceeded the 60% red threshold in all four terminal years (2020-2023) and the South Atlantic harvest metric has exceeded the 30% red threshold in all four terminal years. This is the eighth consecutive year the harvest metric in both regions have exceeded the 30% threshold, although the harvest metrics in 2023 cannot be used as a trigger mechanism since they represent a year with catch restrictions in place.

2023 Abundance Metrics

The Mid-Atlantic metric exceeded the 30% threshold for all four of the terminal years and exceeded 60% in two of those years (2020 and 2023). The South Atlantic composite metric did not trigger in 2023 with none of the terminal years exceeding the 30% threshold.

Conclusions

The harvest metric triggered in both the Mid-Atlantic (60% threshold) and South Atlantic (30% threshold) from 2020 to 2023 indicating continued concern. Since harvest restrictions have been in place since 2021, the harvest metric cannot be used as a trigger mechanism in recent years. The abundance metrics triggered for the Mid-Atlantic at the 30% threshold and did not trigger in the South Atlantic. Addendum III states if triggered measures have remained in place for a minimum of four years due to proportions of red above a threshold for either of the composite regional abundance characteristics, the TC will, as part of conducting the annual TLA, evaluate trends in abundance to recommend to the Board whether triggered measures should remain in place or more restrictive measures should be considered. The TC recommends maintaining current management measures.

1 INTRODUCTION

Atlantic croaker are managed under Amendment 1 to the Interstate Fishery Management Plan for Atlantic Croaker (2005) and Addendum I (2011), Addendum II (2014), and Addendum III (2020). Addendum III describes the Traffic Light Analysis (TLA) using a regional approach and establishes management actions to be taken if the TLA triggers were tripped. Regions are the South Atlantic (FL-NC) and the Mid-Atlantic (VA-NJ).

The TLA is a way to incorporate multiple data sources (both fishery-independent and -dependent) into a single, easily understood metric for management advice. It is often used for data-limited species, or species that are not assessed on a frequent basis. The name comes from assigning 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).

The TLA uses the following data sources in Atlantic croaker management:

- Harvest Metric: recreational and commercial landings by region
- Abundance Metric: Age 2+ abundance indices by region
 - Mid-Atlantic: Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the Northeast Fishery Science Center (NEFSC) Multispecies Bottom Trawl Survey
 - South Atlantic: Southeast Area Monitoring and Assessment Program (SEAMAP) and the South Carolina Department of Natural Resources (SCDNR) Trammel Net Survey

Management action will be triggered according to the current 30% red (moderate concern) and 60% red (significant concern) thresholds if both the abundance and harvest thresholds are exceeded in either region in any three of the four terminal years. The thresholds are defined as the long-term mean of the reference period (2002-2012).

In 2020, the TLA for Atlantic croaker had red proportions that exceeded the threshold of 30% in both the harvest and abundance metrics in the Mid-Atlantic. The South Atlantic region harvest metric also triggered at 30% threshold in 2020. Exceeding the 30% threshold represents moderate concern to the fishery and initiated a moderate management response. All non-*de minimis* states were required to institute more restrictive measures in their recreational and commercial fisheries. Management measures were initiated in 2021 and are required to remain in place for three years, through 2023.

However, the TLA for fishing years 2021 and 2022 resulted in an unknown status due to data issues (e.g., missing years of data due to COVID, vessel changes in ChesMMAP) and uncertainty in how to interpret harvest metrics when management restrictions have been put in place. Additionally, the TLA was not run at all in 2023 due to data being unavailable and to allow the Atlantic Croaker and Spot Technical Committees to focus on assisting with the Atlantic croaker benchmark stock assessment. A benchmark stock assessment was expected in 2024 for Atlantic croaker. However, as of July 2024, the benchmark is still in development and is unlikely to be completed on time. Therefore, the Sciaenid Board requested the TLA be run for the August

2024 meeting. The Board requested the TLA focus only on the metrics used in management, not the supplemental information provided in previous TLA reports.

2 TRAFFIC LIGHT ANALYSIS RESULTS

2.1 Harvest Composite Index (Figure 1 and Figure 2)

- Harvest restrictions were put in place in 2021 in response to the 2020 TLA triggering at the 30% threshold. These restrictions are still in place and thus the harvest metrics cannot be interpreted for the purpose of a TLA, since lower landings get a red designation but measures have been put in place to lower landings.
- Landings in both regions remain low relative to the reference period (2002-2012). It is unknown if this is due to the harvest restrictions or a continued concern for this fishery.
- The Mid-Atlantic harvest exceeds 60% red in all four terminal years. The South Atlantic harvest exceeds 30% red in all four terminal years.
- This is the eighth consecutive year the harvest metric in both regions have exceeded the 30% threshold.

2.2 Abundance Composite Characteristic Index (Figure 3 and Figure 4)

- The Mid-Atlantic abundance index exceeded 30% red threshold in all four of the terminal years. It exceeded the 60% red threshold in two of the four terminal years. Therefore, the Mid-Atlantic abundance index triggered at the 30% level, indicating moderate concern.
- The South Atlantic abundance index did not trigger at 30% or 60% levels. The last four years are predominantly green or yellow, representing no concern.

3 SUMMARY

- Table 1 provides results of the past four years of TLA metrics for each region, as well as the current TLA status.
- Because the harvest metrics cannot be interpreted when management is in place to keep harvest low, interpretation of the TLA relies on the abundance composite indices. Although the South Atlantic abundance index did not trigger at any level, the Mid-Atlantic abundance index did exceed the 30% threshold in all four terminal years.
- The TC recommends maintaining current management measures.

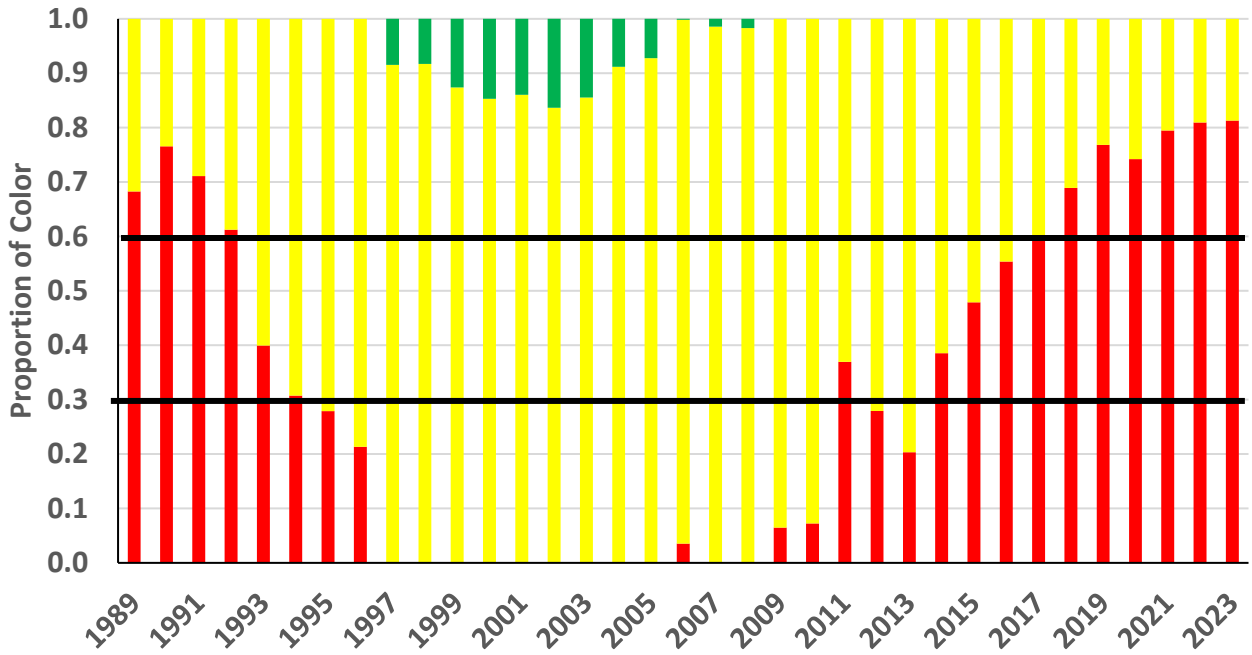


Figure 1. Annual TLA for Atlantic croaker harvest composite (commercial and recreational landings) in the Mid-Atlantic (NJ-VA from 1989-2023 using a 2002-2012 reference period.

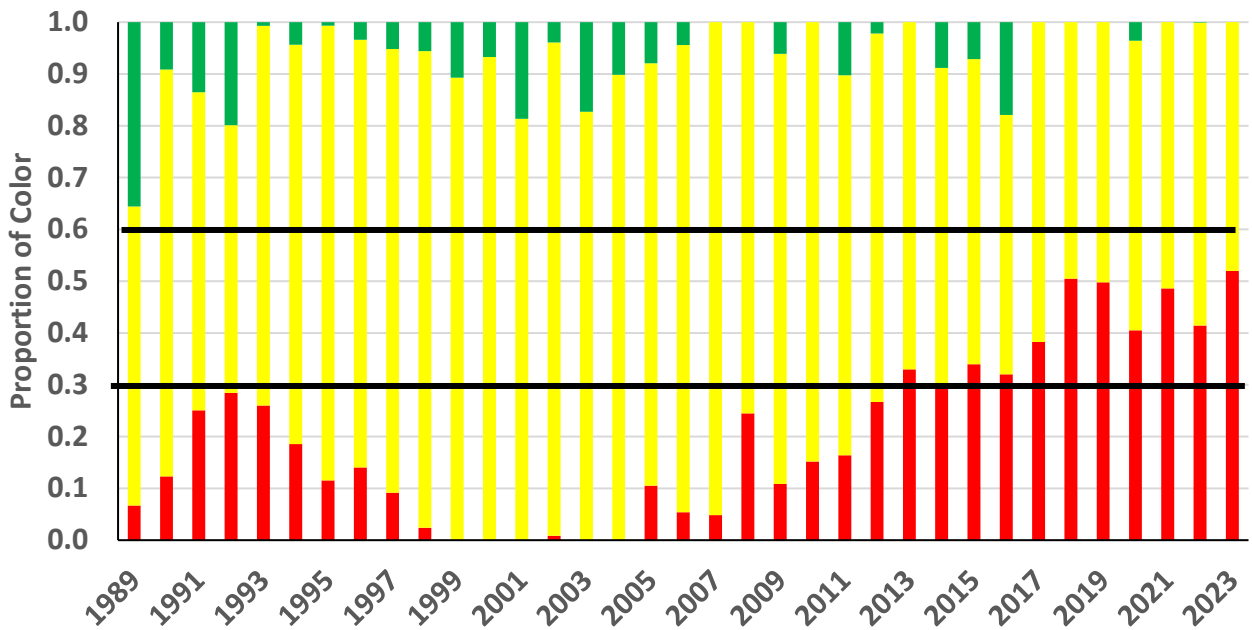


Figure 2. Annual TLA for Atlantic croaker harvest composite (commercial and recreational landings) in the South Atlantic (NC-FL) from 1989-2023 using a 2002-2012 reference period.

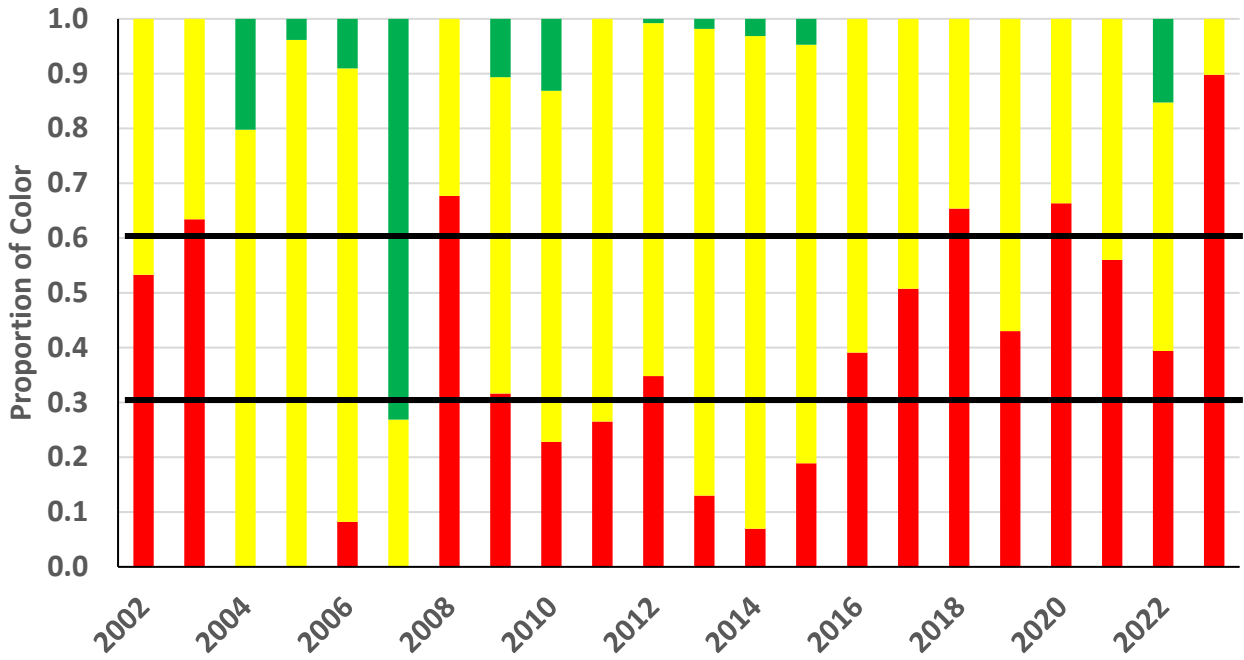


Figure 3. Annual TLA for adult (age 2+) Atlantic croaker composite abundance index in the Mid-Atlantic (NEFSC and ChesMMAAP surveys) from 2002-2023 using a 2002-2012 reference period.

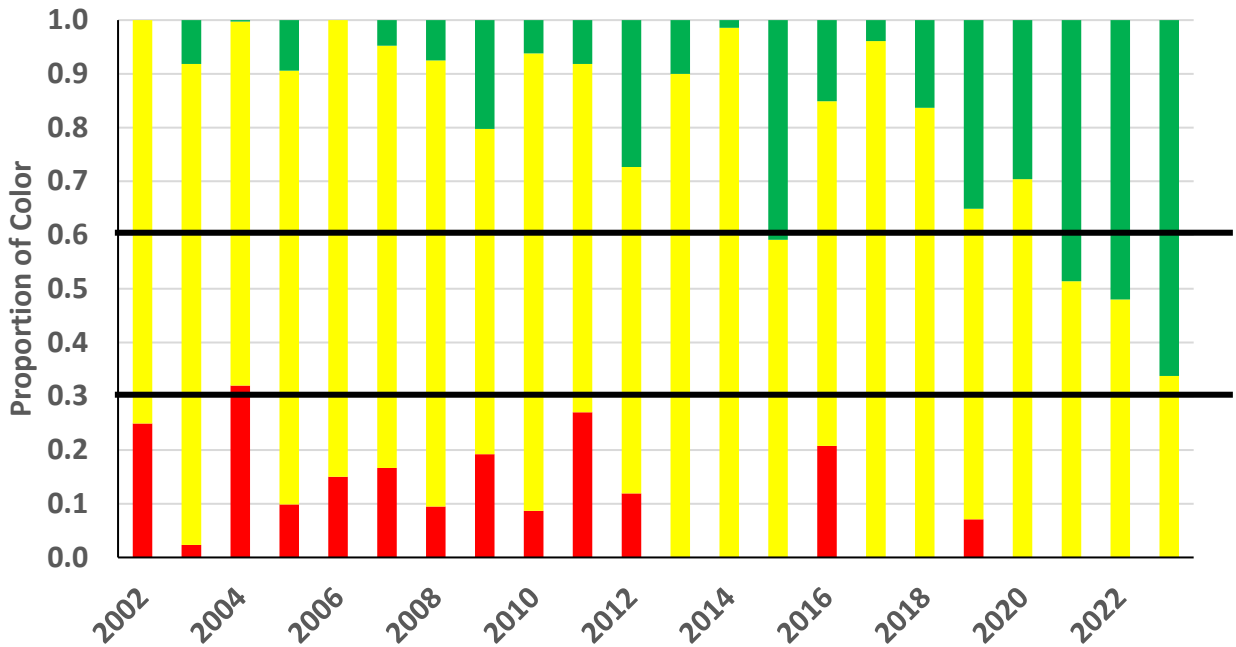


Figure 4. Annual TLA for adult (age 2+) Atlantic croaker composite abundance index in the South Atlantic (SEAMAP and SCDNR trammel survey) from 2002-2023 using a 2002-2012 reference period.

Table 1. Traffic light analysis results for the Mid- and South Atlantic regions for 2020-2023. There were some missing data in 2020 data (e.g., COVID, vessel changes). Management action is triggered according to the current 30% and 60% red thresholds if both the adult abundance and harvest metrics exceed these thresholds in any three of the four terminal years within either region.*

TLA Metric	Atlantic Croaker				2023 TLA Status
	2020	2021	2022	2023	
Mid-Atlantic Harvest*	74% red	79% red	81% red	81% red (triggered at 60%)	Unknown*
South Atlantic Harvest*	41% red	49% red	41% red	52% red (triggered at 30%)	
Mid-Atlantic Adult Index	66% red	56% red	39% red	90% red (triggered at 30%)	Triggered
South Atlantic Adult Index	Unknown	0% red	0% red	0% red (not triggered)	

*Harvest metrics cannot be interpreted as a trigger mechanism in the TLA at this time since catch restrictions to lower harvest were in place since 2021. As long as catch restrictions are in place, trigger status relies solely on the abundance indices.