4. SEDAR 68OA: ATLANTIC SCAMP OPERATIONAL ASSESSMENT

4.1 Documents

Attachment 4a. Scamp/Yellowmouth Additional Forecast Scenarios
Attachment 4b. Scamp/Yellowmouth Nonstationarity in Recruitment

4.2 Presentation

Dr. Kyle Shertzer, SEFSC

4.3 Overview

The SEDAR 68OA: Scamp Operational Assessment was reviewed during the January 2023 SSC meeting where it was determined to be consistent with BSIA, used methods of addressing uncertainty that are consistent with expectations and available information, and is an adequate basis for determining stock status and supporting fishing level recommendations. The estimated spawning stock biomass (SSB) has fluctuated throughout the time series but has been declining since the mid-2000s. The terminal (2021) base-run estimate of spawning stock was near its lowest level of the time series and was well below the minimum stock size threshold (MSST) ($SSB_{2021}/MSST = 0.27$), as was the median estimate ($SSB_{2021}/MSST = 0.29$), indicating that the stock is overfished. The estimated fishing rate has fluctuated around the Maximum Fishing Mortality Threshold (MFMT, represented by $F_{40\%}$) throughout most of the assessment period, but has exceeded it only once since 2010. The terminal estimate, which is based on a three-year geometric mean, is below $F_{40\%}$ in the case of the base run ($F_{2019\text{-}2021}/F_{40\%} = 0.91$) and the median ($F_{2019\text{-}2021}/F_{40\%} = 0.81$). Thus, this assessment indicates that the stock is overfished, but is not experiencing overfishing.

The primary reason for the low stock size in the terminal year of the assessment is not fishing, but rather low recruitment. Recruitment has been lower than average since the mid-2000s, and the lowest values for the entire time series occur since 2010. The SSC determined that the assessment provides a good basis to predict future conditions and support fishing level recommendations; however, the consistently lower recruitment during the recent period (2010-2019), relative to mean recruitment for the full time series, results in substantial uncertainty in predictions of future recruitment and stock biomass.

In April 2023, the SSC recommended setting ABC to $75\%F_{40\%}$ using recent (low) recruitment for projections. They also recommended setting OFL to $F_{40\%}$ using long-term average recruitment; however, this projection was not available in April and was requested from the SEFSC for the July meeting. The SSC should review the additional rebuilding projections and make OFL recommendations in the table below. The SSC is also provided an additional presentation on nonstationarity for Scamp/ and Yellowmouth Grouper due to the difficulty in determining OFL for the stocks.

4.4 Public Comment

4.5 Action

- Review additional requested rebuilding projections and timelines.
- Review presentation regarding nonstationarity, OFL, and rebuilding schedules.
- Make OFL recommendations to complete table below.
    - *Per the SSC's catch level projections workgroup report, OFL should be based on long-term recruitment, and ABC should be based on short-term recent recruitment. The SSC supports the recommendations of this report for setting OFL for Scamp/Yellowmouth.*
    - *As proposed in the report, Tmin and Tmax would be based on the long-term R scenario.*
    - *This is consistent with the prior conclusion of no regime shift. The Klaer et al 2015 paper was used to assess if regime shift had occurred during assessment review → no regime shift*
    - *The SSC is in the process of forming a Workgroup to look at regime shifts and how best to identify their occurrence*
    - *Using different recruitment levels for OFL and ABC creates additional buffer between these two benchmarks than from P* approach alone.*
        - *This approach for setting OFL and ABC values was discussed as part of workgroup review and was accepted by the SSC.*
        - *Because of the uncertainty in recruitment and its influence on rebuilding schedule, the SSC requests an updated operational stock assessment by 2029 (at the termination of the ABC recommendations).*
    - *The SSC was reminded that accountability measures are tied to ACLs and not OFLs.*

Table 2. Scamp Catch Level Recommendations

Criteria	Deterministic	Probabilistic
Overfished evaluation ($SSB/MSST_{)}$	0.36	0.38
Overfishing evaluation ($F/F_{MSY\ proxy}$)	0.91	0.81
MFMT ($F_{MSY\ proxy}$)	0.28	0.30
SSB_{MSY} (metric tons)	1503.87	1540.65
MSST (metric tons)	801.60	801.14
MSY (1000 lbs.)	372.28	381.39
Y at 75% F_{MSY} (1000 lbs.)	344.83	353.68
ABC Control Rule Adjustment	20%	
P-Star	30%	
SSC recommended $P_{Rebuild}$	70%	
M	0.155	
Generation Time	~ 10 years	

OFL RECOMMENDATIONS

Year	Total Removals (lbs ww)	Discard (lbs ww)	Total Removals (number)	Discard (number)
2025	97,000		17,000	
2026	119,000		22,000	
2027	171,000		32,000	
2028	227,000		42,000	
2029	270,000		49,000	

ABC RECOMMENDATIONS

Year	Total Removals (lbs ww)	Discard (lbs ww)	Total Removals (number)	Discard (number)
2025	71,000		12,000	
2026	76,000		12,000	
2027	79,000		13,000	
2028	82,000		13,000	
2029	84,000		14,000	

**Note: Total Removals = Landings plus dead discards*