

SEDAR68-OA Scamp/Yellowmouth Grouper: Additional Forecast Scenario With $F=F40\%$ and Long-term Average Recruitment

Prepared by NMFS Southeast Fisheries Science Center

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Introduction

In an email dated 30 May 2023, from Dr. Chip Collier to Dr. Larry Massey, the SAFMC requested one additional forecast scenario for South Atlantic scamp/yellowmouth grouper on behalf of the SSC. Specifically, the request was for the following:

- 10 year rebuilding projection at $F40\%$ using the long-term average recruitment.

This report fulfills that request.

Methods

Forecast scenario included in this report:

- Scenario 1. $F = F40\%$ starting in 2025, with long-term average recruitment starting in 2023.

Forecast methods were identical to those in the assessment report (SEDAR 2022), but differ slightly here in that the new fishing rate ($F = F40\%$) would be implemented in 2025 rather than 2024.

Results and Discussion

Results from the forecast scenario are shown in Table 1 and Figure 1. Removals shown in Table 1 include landings and dead discards.

References

SEDAR. 2022. SEDAR 68 South Atlantic Scamp Stock Assessment Report. SEDAR, North Charleston SC. 162 pp. Available online at: <https://sedarweb.org/assessments/sedar-68/>

Table 1. Scenario 1: F = F40% with long-term average recruitment starting in 2023. Values shown include recruitment (R), fishing rate (F), spawning biomass (S), and total removals of landings and dead discards (TR) in both numbers and weight. Extension “.base” refers to deterministic projections extending from the base assessment model, and “.med” refers to median values from the stochastic MCBE projections.

year	R.base (1000)	R.med (1000)	F.base	F.med	S.base (mt)	S.med (mt)	TR.base (1000)	TR.med (1000)	TR.base (1000 lb)	TR.med (1000 lb)
2022	76	83	0.32	0.3	289	311	17	17	115	115
2023	291	240	0.33	0.31	291	318	18	18	115	115
2024	291	241	0.34	0.31	331	362	19	19	115	115
2025	291	242	0.28	0.3	434	455	17	19	97	113
2026	291	240	0.28	0.3	570	571	22	24	119	133
2027	291	238	0.28	0.3	702	690	32	33	171	177
2028	291	239	0.28	0.3	808	790	42	42	227	228
2029	291	240	0.28	0.3	887	861	49	49	270	269
2030	291	241	0.28	0.3	943	912	54	53	301	298
2031	291	241	0.28	0.3	983	950	56	55	323	318
2032	291	242	0.28	0.3	1010	977	58	57	338	331
2033	291	238	0.28	0.3	1029	997	59	58	349	342
2034	291	240	0.28	0.3	1042	1012	60	59	356	349
2035	291	240	0.28	0.3	1051	1020	61	59	361	354
2036	291	240	0.28	0.3	1057	1025	61	60	365	357

Figure 1. Scenario 1: $F = F_{40\%}$ with long-term average recruitment starting in 2023.

