Recreational Effort, Catch and Biological Sampling in Florida During the 2023 South Atlantic Red Snapper Season

Ellie Corbett and Beverly Sauls

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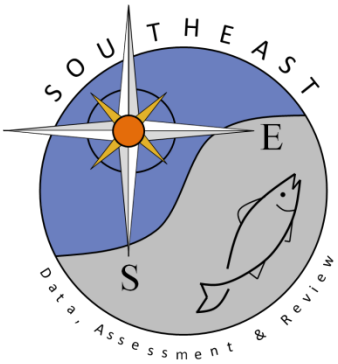

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Final Report
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National Marine Fisheries Service, Southeast Regional Office
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Table of Contents

Acknowledgments

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Executive Summary

Since 2012, the state of Florida has conducted specialized surveys to provide precise estimates of Red Snapper effort and catch during recreational mini-seasons in the South Atlantic (Sauls et al. 2017). This report summarizes methods and results for specialized surveys of the private and charter boat segments of the recreational fishery operating from the east coast of Florida during the 2023 recreational season for Red Snapper in the South Atlantic. The season took place over a single weekend in July (Friday and Saturday, July 14-15, 2023). Final estimates for the 2023 season are provided for both the private and charter boat segments of the recreational fishery.

An estimated 36,974 ± 9,368 (SE) private boat angler trips targeted Red Snapper over the 2023 season, which is a 50% increase from the previous year. Favorable weather was likely a contributing factor. Weather data during the season recorded mostly southern winds offshore that averaged 10 miles per hour, and wave heights averaged 2 feet. A total of 1,057 private boat parties were interviewed upon returning from trips, and an estimated 26,915 ± 6,843 Red Snapper were harvested by private boat anglers.

For the federally permitted charter fleet, a total of 450 active charter vessels with a South Atlantic Snapper-Grouper permit were included in the sample frame, and 394 were selected for this survey. Of those selected, 81.2% responded to the dual mail / telephone survey. An estimated 1,547 ± 91 Red Snapper were harvested during 1,432 ± 73 angler trips from charter vessels over the two-day season. The majority (97.6%) of charter landings were from northeast Florida (Martin County north to the Georgia border).

The Red Snapper harvest season also provides a valuable opportunity to collect a large volume of fishery dependent biological samples over a short period. During the two-day season in 2023, biological data was collected from 1,215 Red Snapper in the private boat fleet and from 309 Red Snapper in the federally permitted charter boat fleet.

Section 1. Private Mode

Methods

The survey design and estimation methods for private boat mode described below were developed over prior Red Snapper seasons, and detailed methods are described by Sauls et al. (2017).

Sample Design — Off the Atlantic coast of peninsular Florida, recreational boaters must pass through one of nine navigable inlets to access Red Snapper fishing grounds in the Exclusive Economic Zone (Figure 1.1). Recreational boat traffic through these egress points was monitored during the season. For each day that an inlet was sampled, boat traffic was observed during one of three time periods. The morning period began at local sunrise (6:30 a.m.) and ended at 11:29 a.m., the midday period began at 11:30 am and ended at 3:29 p.m., and the evening period began at 3:30 pm and ended at local sunset (8:30 pm). To ensure each inlet was monitored for all three periods in a two-day season, recreational vessel activity was monitored each day during either one or two time periods, which were randomly selected and assigned at each inlet (2 days * 3 periods * 8 major inlets = 48 total periods). Matanzas Inlet is a minor egress point and was not monitored during the Red Snapper season. A ratio adjustment calculated from monitoring in prior seasons was applied to St. Augustine to account for the small amount of additional effort through Matanzas Inlet.

A complementary intercept survey was also conducted to interview parties as they returned from boating trips to determine whether they were fishing for Red Snapper, measure catch rates, and collect biological samples from harvested fish. Private boat launch sites adjacent to each of the eight monitored inlets were randomly selected each day. The boat party interview also collected data necessary for a complete accounting of recreational fishing effort specifically for Red Snapper. During an assignment, each party that returned from a recreational boat trip was interviewed to determine the proportion that exited through inlets for the purpose of targeting Red Snapper, and the proportion of fishing trips that departed before sunrise and thus were not accounted for in the inlet boat count survey. Field procedures for conducting trip interviews with intercepted vessels are described in reports for previous years (Sauls et al. 2013, 2014).

Estimation

The following steps were used to estimate total fishing effort (Table 1.1):

1) The numbers of recreational boats observed exiting through each inlet during daylight hours was expanded to generate an unadjusted seasonal estimate of boat trips in the Atlantic Ocean across all inlets;

2) The estimated number of boat trips taken by federally permitted charter vessels (see next section) was subtracted;

3) The remainder was multiplied by the proportion of private recreational boat parties and non-federally permitted charter parties that reported targeting Red Snapper during intercept survey interviews;

4) The estimated boat trips that targeted Red Snapper were adjusted to account for additional boat parties that reported exiting through inlets before sunrise to target Red Snapper; and

5) The adjusted boat trips that targeted Red Snapper were multiplied by the mean number of anglers per intercepted boat party to get the total estimated number of angler trips targeting Red Snapper.

Landings were estimated by multiplying total effort by the mean CPUE (catch per angler trip) estimated from intercept data. Intercept data are weighted proportional to fishing effort across each inlet. A description of calculations is provided in prior years' reports and in Sauls et. al 2017.

Results

Overall, weather was generally favorable for offshore fishing during the 2023 season. NOAA National Data Buoy Center wind speed, direction, and wave height data from offshore of Cape Canaveral indicated mostly southern winds for the duration of the season with an average wind speed of 10 mph and gusts ranging from 2-28 mph. Buoys stationed offshore from Fernandina Beach to Fort Pierce indicated wave height ranging from 1-3 feet, air temperature between 77-87 degrees Fahrenheit and sea surface temperature between 83-87 degrees Fahrenheit.

An estimated 36,974 ± 9,368 (SE) angler trips targeted Red Snapper over the two-day season, which represents a 50% increase compared to the two-day season in 2022. Mean daily fishing effort in 2023 was the highest recorded since the survey began in 2012 (Figure 1.2), and the two-day season length was less effective for reducing fishing effort compared to 2022 season, which was also two days. More favorable weather conditions for offshore fishing is the likely reason for higher effort in 2023 compared to the previous year (Sauls and Corbett 2022). A total of 1,057 private boat parties were interviewed upon returning from trips in the ocean, and 81.1% reported fishing for Red Snapper. Overall catch per unit effort (CPUE) for landed fish was 0.728 ± 0.016 (Table 1.2), which has not varied significantly in recent years. Catch rates for harvested fish were highest from Mayport and Port Canaveral (Table 1.2) and peaked in St. Augustine (0.921±0.023). An estimated 26,915 ± 6,843 Red Snapper were harvested over the two days, and this estimate includes private boats and any off-frame charter vessels not included in the for-hire survey described in the next section. Harvested Red Snapper averaged 590 ± 3.27 mm fork length and 3.996 ± 0.058 kg.

For every Red Snapper harvested during the two-day season, an estimated 1.3 fish were released as discards. The overall discard rate was 0.943 ± 0.066 fish per angler trip and ranged as high as 1.56 ± 0.417 in Cumberland to as low as 0.07 ± 0.044 in Fort Pierce (Table 1.3). A total estimated 34,864 ± 9,143 Red Snapper were released during the season (Table 1.3). There was a 50% increase in the number of parties that reported discarding at least one Red Snapper from 2022 to 2023. While the 2-day season in 2023 was not as effective at reducing discards as in 2022 (Table 1.4), there has been a notable increase during recent years in the proportion of parties interviewed that used a descender device to recompress at least some of the fish that were released (Figure 1.3). Descender device use was rarely reported (<3% of fishing parties interviewed) before the 2020 season, which is the first year a tool that is rigged and ready for use was required on board when fishing for reef fishes in federal waters. Data on descender device

use was not collected in 2020 due to the covid pandemic; however, since then at least one third of fishing parties report using a descender device during the Red Snapper season (Table 1.5).

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Sauls, B. J., Cody, R.P. and Strelcheck, A.J. 2017. Survey methods for estimating Red Snapper landings in a high-effort recreational fishery managed with a small annual catch limit. North American Journal of Fisheries Management 37:302-313.

Table 1.1. Effort estimates for private boat mode by nearest inlet. Parameters include total numbers of boat parties intercepted, mean numbers of anglers per party, proportion of trips targeting Red Snapper, proportion of trips departing after sunrise, an estimate of total numbers of targeted boat trips, and an estimate of total numbers of targeted angler trips. All uncertainty estimates are ± SE.

Inlet	Number of boat parties intercepted	Mean anglers per party	Proportion of trips targeting Red Snapper	Proportion of trips departing after sunrise	Targeted boat trips	Targeted angler trips
Cumberland	71	3.734±0.158	0.875±0.044	0.859±0.043	371±257	1,385±962
Mayport	218	4.147±0.110	0.945±0.022	0.637±0.034	1,607±917	6,664±3,804
St Augustine	116	5.359±0.224	0.875±0.041	0.680±0.046	879±478	4,711±2,569
Ponce Inlet	132	4.120±0.151	0.934±0.032	0.544±0.045	2,058±1,343	8,479±5,537
Port Canaveral	253	4.416±0.106	0.935±0.026	0.453±0.032	1,649±1,105	7,284±4,880
Sebastian Inlet	96	3.880±0.176	0.697±0.08	0.349±0.052	1,301±756	5,046±2,939
Fort Pierce	131	3.595±0.154	0.536±0.054	0.726±0.049	609±381	2,188±1,370
St. Lucie	40	4.00±0.320	0.355±0.086	0.857±0.094	304±218	1,217±873
Overall	1057	4.245±0.057	0.811±0.017	0.581±0.016	8,778±2,219	36,974±9,368

Table 1.2. Mean CPUE (landings per angler trip), estimated total landings, mean weight (kg), and estimated total landings (kg). All uncertainty is expressed as ± SE.

Inlet	**CPUE**	**Landings (# fish)**	**Mean weight (kg)**	**Landings (kg)**
Cumberland	0.733±0.052	1,015±708	3.451±0.186	
Mayport	0.775±0.028	5,164±2,952	3.811±0.157	
St Augustine	0.921±0.023	4,340±2,368	4.403±0.105	
Ponce	0.706±0.040	5,983±3,916	3.937±0.148	
Port Canaveral	0.811±0.025	5,910±3,962	4.486±0.084	
Sebastian	0.67±0.048	3,380±1,978	3.747±0.183	
Fort Pierce	0.336±0.050	734±468	3.204±0.374	
St. Lucie	0.310±0.170	377±306	1.658±0.218	
Overall	0.728±0.016	26,915±6,843	3.996±0.058	107,553±27,388
c.v.	0.022	0.254	0.015	0.255

Table 1.3. Mean releases per angler trip and estimated total landings ±SE.

Inlet	Mean Release per angler trip	Estimated Releases (numbers of fish)
Cumberland	1.556±0.417	2,154±1,553
Mayport	1.153±0.158	7,680±4,468
St Augustine	1.062±0.165	5,003±2,805
Ponce	1.025±0.184	8,689±5,796
Port Canaveral	1.024±0.122	7,462±5,043
Sebastian	0.698±0.13	3,523±2,120
Fort Pierce	0.070±0.044	153±122
St. Lucie	0.143±0.113	174±157
Overall	0.943±0.066	34,864±9,143
c.v.	0.070	.262

Table 1.4. Season length and total catch estimates for private boat mode expressed in numbers of Red Snapper during 2023 as compared to previous monitored seasons.

Year	Month(s)	Number of days	Estimated harvest $\hat{C}_{harv}(\pm s.e.)$	Estimated discards $\hat{C}_{disc}(\pm s.e.)$
2023	July	2	26,915 (±6,843)	34,864 (±9,143)
2022	July	2	16,324 (±4,549)	24,273 (±7,142)
2021	July	3	30,206 (±3,159)	54,685 (±5,541)
2020	July	4	30,921 (±5,820)	Not available
2019	July	5	37,750 (±6,292)	56,648 (±10,163)
2018	August	6	30,050 (±6,256)	41,660 (±10,057)
2017	Nov.-Dec.	9	5,390 (±475)	4,331 (±561)
2014	July	8	22,013 (±2,782)	9,755 (±1,741)
2013	August	3	6,999 (±1,321)	5,033 (±1,512)
2012	Sept.	6	11,136 (±1,734)	17,587 (±9,031)

Table 1.5. Proportion of fishing parties interviewed during 2023 that reported discarding Red Snapper in-season by release method. Data were summarized for parties that reported releasing all fish at the surface without applying a barotrauma mitigation technique (surface release only), venting at least some (or all) fish released at the surface (venting), descending at least some fish (descending), or venting and descending at least some fish (venting and descending).

Inlet	Fishing parties (n)	Surface release only	Venting	Descending	Venting and descending
Cumberland Sound	42	0.214	0.333	0.333	0.119
Mayport	116	0.302	0.319	0.259	0.121
St. Augustine	86	0.198	0.453	0.221	0.128
Ponce Inlet	81	0.346	0.432	0.185	0.037
Port Canaveral	158	0.133	0.449	0.297	0.120
Sebastian Inlet	32	0.156	0.406	0.250	0.188
Fort Pierce	7	0.429	0.286	0.286	0
St. Lucie	4	0	1	0	0
Overall	526	0.224	0.409	0.257	0.110

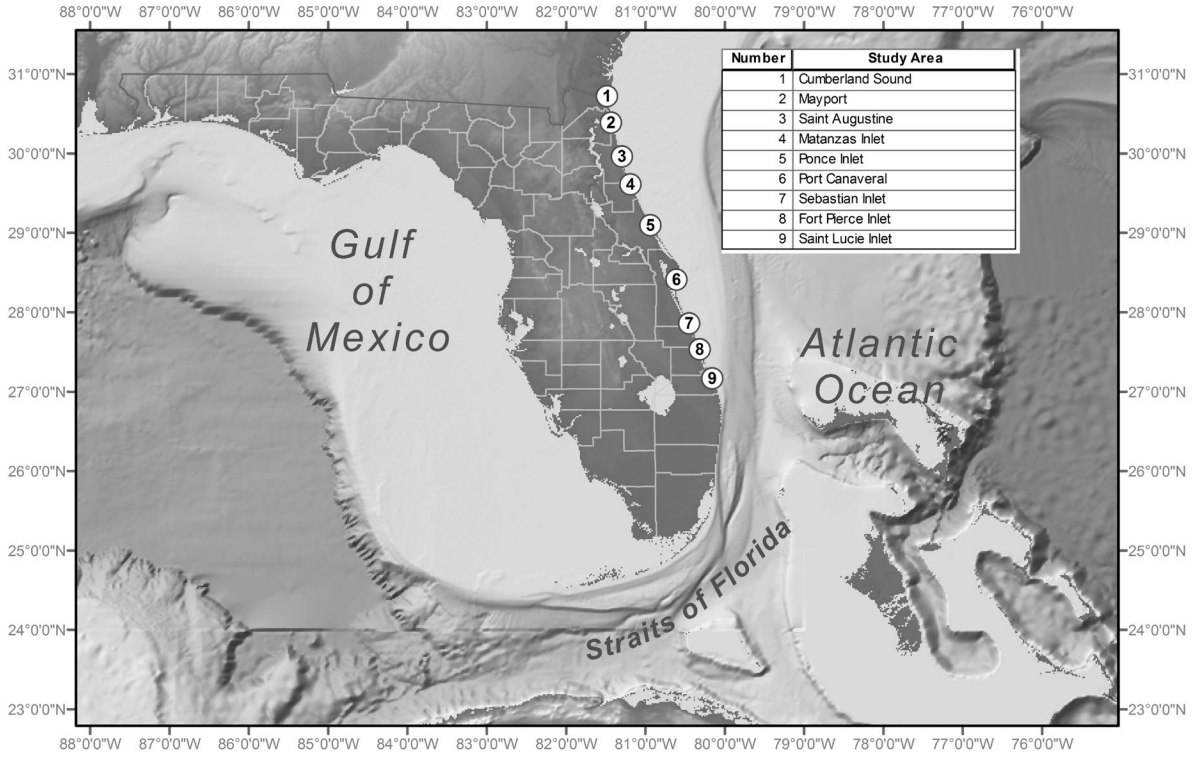

Figure 1.1. Geographic area of study and inlets included in study area.

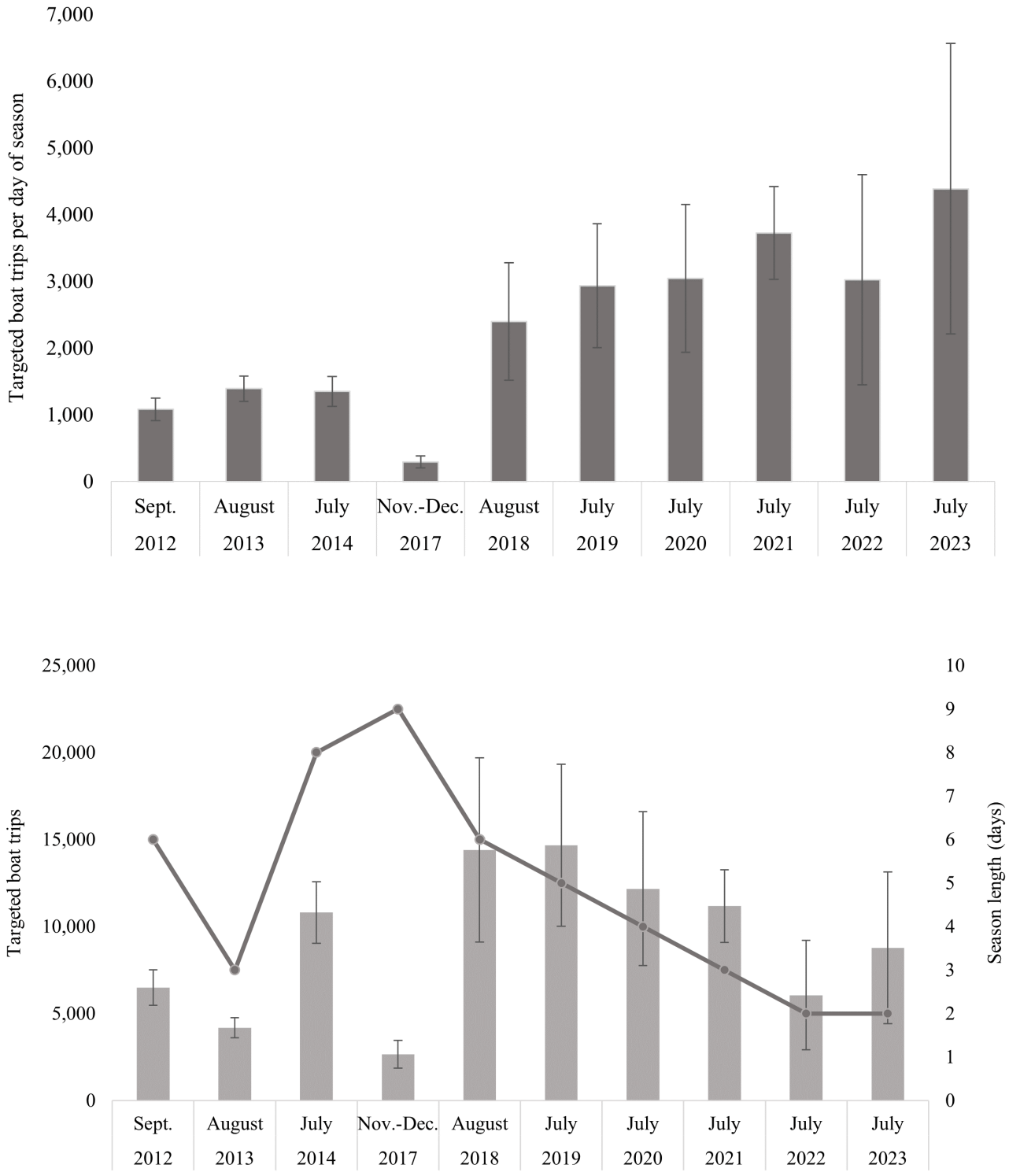

Figure 1.2. Mean boat parties per day that targeted Red Snapper during the harvest season (top panel), and total estimated boat trips with season length as a second axis (bottom panel).

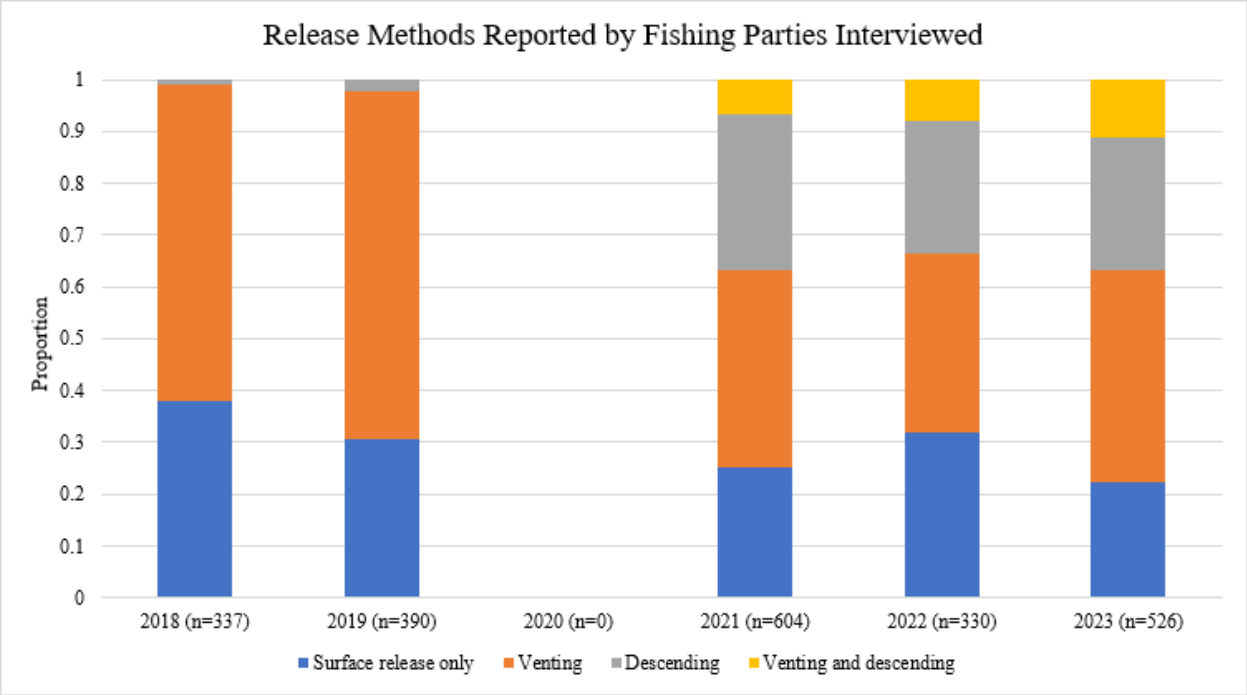

Figure 1.3. Proportion of fishing parties interviewed by year that reported release method techniques. Data on release methods was not collected in 2020 during the covid pandemic.

Section 2: Charter Mode

Methods

Mail / Telephone Survey — A list of for-hire vessels with federal permits in the South Atlantic is provided to FWRI each year by for the purpose of identifying the population of active charter vessels included in the MRIP For-Hire Survey (FHS) in Florida that possess a South Atlantic Snapper-Grouper permit. This population is surveyed on their fishing activity during the Red Snapper season in the South Atlantic, and responses are used to generate an expanded estimate of effort and catch. A list of all valid federally permitted vessels was requested, which was provided by the NOAA Fisheries Southeast Regional Office (SERO) prior to the season opening. The permit list was merged (using the vessel registration number) with an up-to-date list of active charter vessels operating in Florida. This list is maintained by FWC for NOAA Fisheries and serves as the sample frame for the telephone survey portion of the MRIP For-Hire Survey (FHS, for complete documentation: https://media.fisheries.noaa.gov/2021-09/MRIP-Survey-Design-and-Statistical-Methods-2021-09-15.pdf). The wave 4, 2023, directory for the FHS was used to identify the total number of known, active charter vessels in Florida that possessed a valid federal permit to harvest Snapper-Grouper species in the South Atlantic during the July 2023 season. Vessels selected to participate in the FHTS (10% sampled weekly) during the South Atlantic Red Snapper season were excluded from FWC's survey, and all remaining vessels were selected to report Red Snapper trips during the 2023 season.

Two weeks before the July fishing season opened, each selected vessel was sent a letter describing the intent of FWC staff to collect catch and effort data for charter trips targeting or harvesting Red Snapper. The letter explained that captains could participate in the survey by completing and returning the enclosed log sheet (Appendix 1). If the log sheet was not returned, FWC attempted to contact vessel operators by telephone up to two weeks after the Red Snapper season. The log sheets were printed on waterproof paper to encourage captains to fill it out while on the boat to improve the accuracy of responses. A postage-paid envelope was also provided to encourage prompt return of the log sheet. The logs provided space to record trip and catch level data for up to three trips that targeted Red Snapper on each day the Red Snapper season was open, including: number of anglers, number of passengers, trip origin (state and county), distance from shore and depth fished, dock to dock hours, hours fished, and numbers of Red Snapper harvested and released (Appendix 2). Each vessel representative was called up to five times, or until a successful contact was made or their mailed log sheet was received (Figure 2.1). Vessels that did not return the log sheet or that could not be contacted by the fifth call attempt were marked as non-contacts for the fishing season.

Catch and Effort Estimation – Survey responses were used to estimate the total number of charter boat trips that targeted Red Snapper, charter angler trips that targeted Red Snapper, and numbers of fish harvested and discarded by all active federally permitted charter vessels during the South Atlantic Red Snapper fishing season. The formula used to calculate the total boat trips, angler trips, and numbers of fish harvested and released for each region is:

$$\hat{Y} = \sum_{i=1}^{n} w_h y_{h,i} \qquad (2.1)$$

Where $y_{h,i}$ corresponds with the total number of boat trips, anglers, or fish reported by respondent *i* in region *h* during the two days when Red Snapper harvest was open. The sample weight, w_h, accounts for variable participation and survey response rates across different regions of the state and was calculated as:

$$w_h = {}^{N_h}/_{n_h} \quad (2.2)$$

Where N_h is the total number of active federally permitted charter vessels in region *h*, and n_h is the total number selected in region *h* that responded to the survey. The Northeast region included permitted vessels with a home port in one of the counties on the Atlantic coast of Florida where Red Snapper are most likely to be targeted during the South Atlantic season (Table 2.1). Additionally, vessels with home ports in southeast Florida, Monroe County, and the Gulf coast of the state were treated as three separate strata in the estimation (Table 2.1). The SAS procedure, PROC SURVEYMEANS, was used for this estimation (Appendix 3), and the variance is calculated using the Taylor Series method (SAS Institute Inc., 2008).

Undercoverage Adjustment – Off-frame charter vessels that were encountered during surveys described in section 1 were included in expansions for total effort and catch in the private boat fishery (described in section 1, above). Thus, an under-coverage adjustment was not applied to the estimates of fishing effort and catch for charter mode, since this would result in an over-estimate of total recreational landings for both modes combined.

Results and Discussion: Charter Mode

The 2023 South Atlantic Red Snapper season marked the seventh year that a dual mail / phone survey was used to collect trip level data from the federal for-hire fleet. The survey was distributed to a total of 394 permitted vessels, with an overall response rate of 81.2% (Table 2.2a) and the highest response since the start of the dual survey (Table 2.2b). Estimates of boat trips, angler trips, harvest, and discards were generated for northeast Florida (Nassau to Martin Counties), southeast Florida (Palm Beach to Miami-Dade Counties), and the Florida Keys (Monroe County) (Table 2.3). Overall during the 2023 season, an estimated 1,547 ± 91 (SE) Red Snapper were harvested during 284 ± 12 (SE) charter boat trips. Trip details provided by 62 charter vessels operating in northeast Florida reported an average fishing depth of 33.37 ± 15.69 meters and distance from shore of 21.43 ± 9.50 miles (Table 2.5). The 2023 survey yielded two trip-level reports from the Florida Keys, and these trip reports indicate that charter trips occurred closer to shore (19.43 ± 20.16 miles from shore), but deeper depths (70.54 ± 26.83 meters) than northeast Florida Trips. The survey additionally yielded one trip level report from the southeast region in Miami-Dade County. This individual trip reported a mean distance from shore of 4.00 miles, fishing at a depth of 91.44 meters which is both substantially closer to shore and in deeper water than other reported trips. No Red Snapper trips were reported by respondents from vessels with home ports in west Florida (Escambia to Collier Counties).

Table 2.1. Regional groupings of coastal counties used for generating catch and effort estimates.

Region	Coastal Counties
Northeast	Nassau, Duval, Clay, St Johns, Flagler, Volusia, Brevard, St. Lucie, Martin
Southeast	Palm Beach, Broward, Miami-Dade
Keys	Monroe
West Florida	Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf, Franklin, Wakulla, Taylor, Dixie, Levy, Citrus, Hernando, Pasco, Pinellas, Hillsborough, Manatee, Sarasota, Charlotte, Lee, Collier

Table 2.2a. Survey frame, summary of response via mail and phone, and response rates by region for the 2023 season.

Region	Charter Vessels	Total Selected	Proportion Selected	Mail Responses	Phone Responses	Response Rate
Northeast	174	153	0.879	25	100	0.817
Southeast	57	53	0.930	6	38	0.830
Keys	146	126	0.863	16	84	0.794
West Florida	73	62	0.849	17	35	0.839
Overall	*450*	*394*	0.876	*63*	*257*	0.812

Table 2.2b. Table of response rates from 2017-2023, the time frame that the combined mail-telephone survey has been conducted.

Year	Northeast	Southeast	Keys	West Florida	Overall
2023	0.817	0.830	0.794	0.839	*0.812*
2022	0.814	1.000	0.725	0.864	*0.808*
2021	0.846	0.522	0.772	0.831	*0.779*
2020	0.731	0.447	0.709	0.886	*0.724*
2019	0.688	0.683	0.691	0.907	*0.740*
2018	0.703	0.816	0.777	0.902	*0.792*
2017	0.846	0.763	0.768	0.875	*0.803*

Table 2.3. Total estimated effort and catch (±SE) from active, federally permitted charter vessels.

Region	Targeted Boat Trips	Targeted Angler Trips	Total Fish Harvested	Mean Weight per Fish (lb.)	Total Pounds Landed	Total Fish Released
Northeast	267 (12)	1,356 (71)	1,510 (89)			2,151 (374)
Southeast	4 (1)	18 (7)	0			0
Keys	13 (3)	58 (13)	37 (14)			3 (3)
Overall	*284 (12)*	*1,432 (73)*	*1,547 (91)*	*4.615 (0.111)*	*7,139 (452)*	*2,155 (375)*

Table 2.4. Mean daily charter effort in 2023 compared with prior years.

Year	Season Length (Days)	Targeted Boat Trips	Targeted Boat Trips per Day	Angler Trips	Angler Trips per Day
2023	2	284	142	1432	716
2022	2	266	133	1347	674
2021	3	372	124	3785	1262
2020	4	592	148	2783	696
2019	5	584	117	2899	580

Table 2.5. Summary of reported depth and distance from shore for charter fishing trips taken during the 2023 South Atlantic Red Snapper fishing season.

Region	**Boat Trips**	**Depth (m)**		**Distance From Shore (mi)**	
		Mean	*S.E.*	*Mean*	*S.E.*
Northeast	62	33.37	15.69	21.43	9.5
Southeast	1	91.44	-	4	-
FL Keys	2	70.54	26.83	19.43	20.16
Overall	*65*	*37.6*	*20.94*	*20.88*	*10.76*

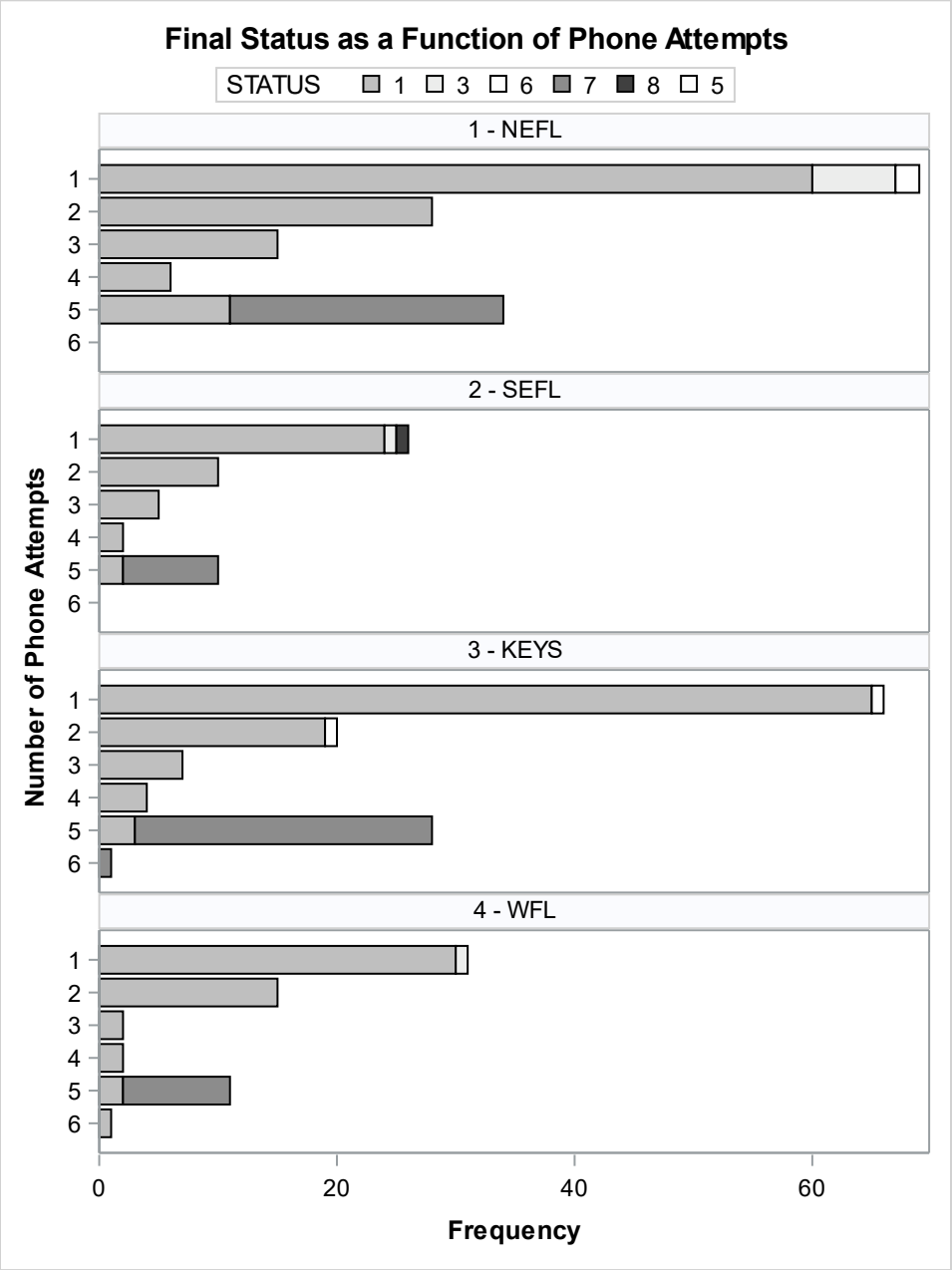

Figure 2.1. Frequency of attempted phone calls to federally permitted charter representatives, as a function of the status after the final call. Status Codes: 1=Complete interview, 2=Incomplete, but all key questions answered, 3=Refusal, 4=Language barrier, 5=Mid-Interview refusal, 6=Ineligible, 7=Unable to Contact, 8=Inactive.

Section 3. Biological Sampling

Methods

The Red Snapper harvest season provides an opportunity to collect fishery dependent biological samples from a species with a very short open season. Biological samples were collected from both the private boat and charter boat fisheries (described above in Section 1). Each fish was measured (at midline in mm), weighed (kg), and one otolith was extracted for ageing.

To account for varied sampling rates across inlets in the study area, sample weights were calculated. For private boat catch, sample weights were calculated for each inlet as:

$$W_h = \hat{C}_h / n_h \quad (3.1)$$

where $\hat{C}_h$ is the estimated landings for inlet *h* (reported in Table 1.3), and *n* is the number of fish sampled in inlet *h* (reported in results section below). Sample weights for each inlet were used to calculate an overall weighted mean for fork length (in mm) and kilograms for landed fish (using the survey means procedure in SAS). The sample weights for fish in each 1 cm length bin were also summed and divided by the sum of all sample weights (equal to total estimated landings) to calculate the weighted proportion of fish in each size category.

Results

Biological samples were collected during intercept assignments from both the private boat and charter fisheries. Sample sizes during 2023 are provided in Table 3.1. The length frequency of fish harvested by private boat anglers and charter boats is shown in Figure 3.1. Red Snapper sampled from the private boat fishery (including off-frame charter trips) had a mean length of 586.39 mm (SE=3.44) and mean weight of 3.93 kg (SE=0.06). Red Snapper sampled from charter boats that were included in the charter survey averaged 627.95 mm (SE=5.47) and 4.62 kg (SE=0.11).

Table 3.1. Numbers of fish sampled from private boat and charter boat trips.

PRIVATE BOAT		
Inlet	Lengths	Weights
Cumberland	79	73
Mayport	172	170
St. Augustine	221	221
Ponce Inlet	174	171
Port Canaveral	395	375
Sebastian Inlet	123	120
Fort Pierce Inlet	38	38
St. Lucie Inlet	13	13
Total	*1215*	*1181*

CHARTER BOAT		
Cumberland	23	23
Mayport	21	21
St. Augustine	143	143
Ponce Inlet	14	14
Port Canaveral	95	89
Sebastian	3	3
St. Lucie Inlet	10	10
Total	*309*	*303*

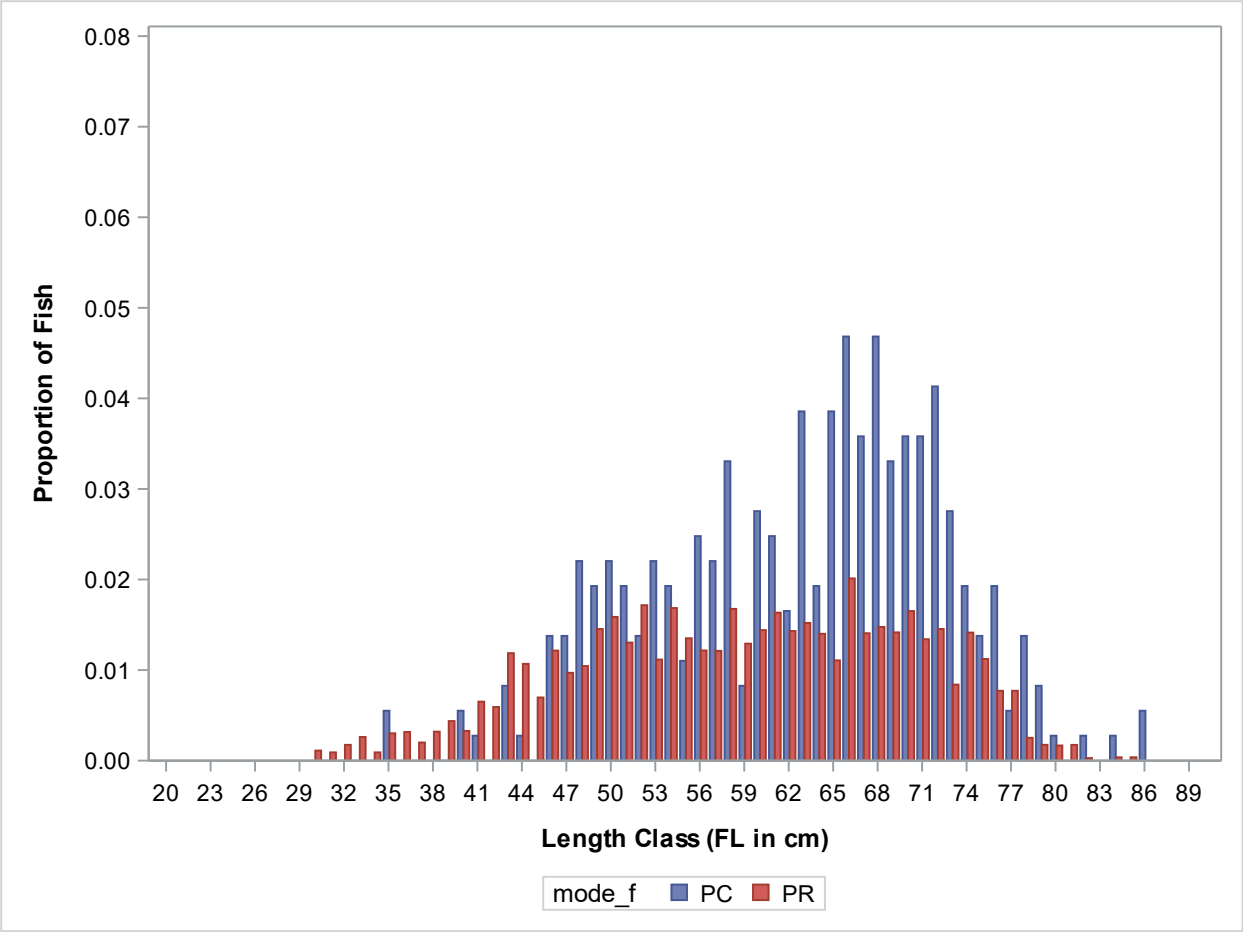

Figure 3.1. Size distribution of harvested Red Snapper sampled from private boat and charter boat trips sampled during 2023. Samples from private boats are weighted proportional to total estimated landings for each inlet.

Appendix 1. Letter sent to federally permitted charter representatives the week prior to the South Atlantic Red Snapper Season opening.

FWC RED SNAPPER SURVEY

Fish and Wildlife Research Institute
100 Eighth Avenue SE
St. Petersburg, Florida
33701-5020

Voice: 727-896-8626
Fax: 727-823-0166

Hearing/speech-impaired:
800-955-8771 (T)
800-955-8770 (V)

MyFWC.com/Research

July 1, 2023

Dear Florida Charter Vessel Operator;

The 2023 federal red snapper recreational fishery in the South Atlantic will be open for two days, over one weekend, July 14th – July 15th. The state of Florida is requesting your assistance so that we can collect more precise information on the numbers of charter trips and numbers of red snapper harvested during this short season. You are receiving this letter because our records show that you have a valid South Atlantic Headboat/Charter Snapper-Grouper permit. Enclosed is a log sheet printed on waterproof paper that may be used to keep track of your charter fishing activity during the 2023 federal red snapper recreational season. You may respond to this survey in one of two ways:

1. At the close of the federal red snapper season, return the completed log sheet using the self-addressed postage-paid envelope. If your charter business is not offering charter fishing trips in the Atlantic Ocean during the 2023 season, simply record this information at the top of the log sheet and mail it to us at your earliest convenience.

2. After July 15th, an FWC biologist will contact you by telephone to conduct a short interview and collect information about your charter fishing activity during the red snapper season. If you have already mailed your log sheet to FWC when you receive our call, please let the caller know and we will not contact you again.

We are collecting this additional information because the regular dockside intercept survey (when FWC biologists interview charter customers at the dock) was not designed to precisely estimate landings over very short fishing seasons. Therefore, your assistance during this special season is requested to ensure that we collect the best data possible to assess the federal red snapper season. Results from this survey will be shared directly with federal fishery managers for use in monitoring landings during the 2023 season and stock assessment updates for red snapper.

FWC will also be conducting dockside surveys with charter boat and private recreational anglers as they return from red snapper fishing trips. Biologists will ask for permission to weigh and measure fish and collect samples to determine the age of each fish. The recreational harvest season offers our only opportunity to collect this vital information for use in future stock assessments. To learn more about these efforts, please visit our website. A copy of the report produced last year is available at https://myfwc.com/research/saltwater/fishstats/srfs/atlanticredsnapper/. Please feel free to contact me, Beverly Sauls, at (727) 896-8626 or FishStats@MyFWC.com if you have any questions or concerns. Thank you for your cooperation.

Sincerely,

Beverly Sauls

Beverly Sauls
Research Administrator

Appendix 2. Log sheet send to federally permitted charter representatives the week prior to the South Atlantic Red Snapper season opening.

Florida – Red Snapper Survey Log Vessel Name: Vessel Number:

Did you participate in the 2023 Federal South Atlantic Red Snapper Season (Trips where you caught or tried to catch Atlantic Red Snapper)? *YES* *NO*
If you circled yes above, please complete the log sheet below. ***Only report trips where Atlantic Red snapper were harvested, released at sea, or targeted.***

Please return all completed log sheets with the self-addressed postage-paid envelope provided. Thank you for your participation.

Date	Day of Week	Trip No.	Trip Type (Charter, Headboat, or Other)	No. of Anglers	No. in Party	Origin of Trip		Miles from Shore (range)	Miles from Shore (majority of trip)	Depth Fished (majority of trip)	Time Trip Started (24hr)	Time Trip Ended (24hr)	Time Spent Fishing (nearest half-hr)	No. of Atlantic Red Snapper Kept	No. of Atlantic Red Snapper Released
						State	County								
7/14/2023	FRI	1													
7/14/2023	FRI	2													
7/14/2023	FRI	3													
7/15/2023	SAT	1													
7/15/2023	SAT	2													
7/15/2023	SAT	3													

Please write any additional comments about the season or your trips below or on the back of this sheet.

Appendix 3. The PROC SURVEYMEANS code used in SAS to generate the estimated number of charter boat trips that targeted Red Snapper, charter angler trips that targeted Red Snapper, and numbers of fish harvested and discarded by all active federally permitted charter vessels during the 2023 South Atlantic Red Snapper season.

```
 *CALCULATE ESTIMATES FOR TRIPS TAKEN, NUMBER OF TOTAL ANGLERS, NUMBER OF HARVESTED FISH, NUMBER OF RELEASED FISH;
proc surveymeans data=merg2 total=population sum sumwgt varsum cvsum stderr;
    strata region ;
    var rf_trips anglers num_harv num_rel;
    weight w;
    domain region ;
    ods output StrataInfo=stratinfo statistics=stats domain=domainstats;
    run;
```