

Snapper Grouper Recreational Reporting App Survey

Problem Statement

Introduction

In order to ensure sustainable fisheries as mandated by the Magnuson Stevens Fishery Conservation and Management Act, fisheries management depends on reliable and timely fisheries data. Unfortunately, U.S. recreational fisheries data are confined by limited surveys and data collection. The private recreational fishery is a significant component of the catch and harvest of snapper grouper species in the South Atlantic region; however, data are limited on the number of participants, catch and harvest, and the size distribution of discards. The fishing public and other stakeholders are increasingly dissatisfied with snapper grouper estimates of recreational landings and discards which significantly impact recreational fisheries management.

To obtain information on catch and effort from private recreational anglers, the National Marine Fisheries Service (NMFS) created the Marine Recreational Information Program (MRIP). MRIP collects information on recreational fisheries through a combination of phone, mail, and creel surveys. Even though MRIP continues to undergo revisions, the fishing public and other stakeholders continue to express concern and frustration with the estimates of private recreational landings and discards. Of primary concern is the extremely low number of intercepts for many snapper grouper species. Low intercepts can impact the proportional standard error (PSE), and annual catch limits (ACLs). High PSEs and low ACLs can ultimately result in closures and limited recreational seasons.

To address and improve recreational reporting, as included as an action/alternative to Amendment 46, the South Atlantic Fishery Management Council in partnership with the Snook and Gamefish Foundation is creating a recreational snapper grouper electronic permitting and reporting app and web-portal, MyFishCount. The app and web-portal will allow for the permitting of recreational snapper grouper anglers and enables anglers to record their catch. The app has the potential to produce timely data, lower PSEs, and ultimately better outcomes for recreational fisheries management.

During the fall 2017 red snapper mini-season the reporting web-portal, MyFishCount.com, was modified and available recreational anglers to allow them to report their red snapper catches and discards. A total of 360 anglers created MyFishCount member profiles and 341 trips (completed and abandoned - trips reported where anglers intended to fish but could not due to weather or other circumstances) were reported. Anglers were able to report and log information about the lengths and weight of their catch and discards, how fish were released, photos of their catch, and more. The timely produced data was considered by the National Marine Fisheries Service in order to extend the 2017 red snapper mini-season, allowing for an additional weekend in December. The platform will continue to be improved based on user feedback and is in the process of being modified into a mobile app.

Purpose of Study

The purpose of this study is to provide the South Atlantic Fishery Management Council with an understanding of the universe of recreational snapper grouper fishermen, perceptions and opinions of recreational reporting that might influence angler behavior, angler motivations, and gain feedback on improvements and modifications to be applied to the recreational reporting app and web-portal. The findings from this study will be used by the South Atlantic Fishery Management Council to inform future education and outreach efforts regarding MyFishCount, in addition to adapting the web portal and app to anglers needs.

Research Questions

The research questions addressed in this project are:

- 1) What is the level recreational snapper grouper fishing effort and angler avidity in the South Atlantic?
- 2) What are the attitudes, perceptions, and opinions of electronic recreational reporting that might influence an angler's behavior to electronically report?
- 3) What motivates anglers to participate in recreational reporting projects?
- 4) What are modifications or improvements that can be made to the app and web-portal?

Methods and Procedures

Overall Survey Design

Three surveys will be administered throughout this study. These surveys include an initial survey for those who used or signed up for the web-portal MyFishCount and those who did not, a survey while the study is being conducted, and a final exit survey. The goal of these surveys is to develop an understanding of the recreational snapper grouper effort and angler avidity in the South Atlantic, obtain opinions and perceptions of electronic recreational reporting, understand angler motivations, and acquire feedback on modifications and improvements that can be made to the app and web-portal. In order to thoroughly investigate the attitudes and opinions of electronic recreational reporting that might influence angler behavior, part of the survey will be based on the "Theory of Planned Behavior" by Icek Aizen in 1991. According to the Theory of Planned Behavior, human behavior is influenced on an individual's attitude toward the behavior, the subjective norm, and the perceived behavioral control. Questions within the survey will be aimed at specifically determining factors that influence an angler's behavior. Understanding angler motivations to participate will be based on motivational scales developed from literature summaries by Chelsey Campbell from the University of Florida. These surveys will address different goals depending on when the survey is administered. Additionally, the intention of conducting multiple surveys is to examine whether opinions and perceptions of recreational reporting change throughout the study.

Survey Instrument

- In order to achieve the objectives of this study, three (online) surveys will be administered to selected recreational snapper grouper anglers along the South Atlantic coast from North Carolina to the eastern side of the Florida Keys.
- Surveys will be comprised of qualitative and quantitative questions.
- Pre-test will be administered to select anglers.

Sample Design and Sampling Frame

- The initial survey will be distributed to the Council's constant contact list and anglers who signed up for MyFishCount.
- Work with State Agencies to identify recreational snapper grouper anglers.
- Work recreational sport fishing clubs along South Atlantic to promote project and recruit recreational anglers for pilot project.

Survey Formation and Implementation

- Once draft survey is completed, plan to host a focus group for each survey with recreational snapper grouper anglers in order to provide feedback on question wording, flow, and length of the survey. In addition to feedback from recreational anglers, Council staff and the Information and Technology Advisory panel will be consulted.

Data Analysis

- R or SPSS for analysis.
- Nvivo to code for themes and patterns within comments provided.

Draft: Modified from Initial Survey

Please note: Italicized text is intended to assist in the development process and will not be included in the live survey. The survey will be designed using Qualtrics, and any question that includes a likert scale will appear in the style seen [here](#). There will also be a consent form at the beginning of the survey which is not included in this draft document.

Part 1: What is the level of recreational snapper grouper fishing effort and angler avidity in the South Atlantic?

Part 2: What are the attitudes, perceptions, and opinions of electronic recreational reporting that might influence an angler's behavior to electronically report?

Part 3: What are the attitudes, perceptions, and opinions of MyFishCount, and how can the platform be improved? (this will contain two parts: one for those who signed up for MyFishCount and one for those who did not)

Part 4: Demographics

Thank you for agreeing to participate in this survey! Throughout the survey, we will refer to “snapper grouper species”, which indicates the 55 species that make up the snapper grouper complex. This complex includes three sea bass species, 17 grouper species, 10 snapper species, seven porgy species, five grunt species, five jack species, three tilefish species, two triggerfish species, hogfish, spadefish and wreckfish. [Click here for a complete list of species.](#)

Questions

Part 1:

- 1) In an average calendar year, how many private recreational fishing trips do you take?
 - 0 trips
 - 1-5 trips per year
 - 6-10 trips per year
 - Monthly
 - 2-3 trips per month
 - Weekly
 - >1 trip per week

- 2) Of the trips indicated in the question above, how many are private recreational snapper grouper trips? Consider a snapper grouper trip as any fishing trip where you actively targeted snapper grouper species for at least part of the time.
 - 0 trips
 - 1-5 trips per year
 - 6-10 trips per year
 - Monthly
 - 2-3 trips per month
 - Weekly
 - >1 trip per week

- 3) How often do you take trips that only target snapper grouper species?
- I exclusively target snapper grouper species
 - I mostly target snapper grouper species, but will sometimes switch to another species within the same trip
 - I target snapper grouper species about 50% of the time
 - I mostly target other species, but will sometimes switch to snapper grouper species within the same trip
 - I never target snapper grouper species
- 4) Compared to other species in the South Atlantic, how important is fishing for snapper grouper species?
- Snapper grouper species are the most important target species
 - Snapper grouper species among the most important target species
 - Snapper grouper species are neither important nor unimportant
 - Snapper grouper species are among the least important target species
 - Snapper grouper species are not important target species
- 5) Please indicate for an average year, the times of year you snapper grouper fish. Please check all that apply.
- Fall
 - Winter
 - Spring
 - Summer

Part 2:

- 6) Please indicate your opinion of recreational reporting for recreational fisheries.
- Reporting should be mandatory for all recreational fisheries
 - Reporting should be mandatory for some but not all recreational fisheries
 - Reporting should be voluntary for recreational fisheries
 - Reporting is not necessary for recreational fisheries
 - I am undecided about reporting for recreational fisheries
- 7) Please indicate your level of satisfaction of the current recreational monitoring program (not including MyFishCount) that estimates recreational catch and effort for private recreational snapper grouper anglers.
- Very Satisfied
 - Somewhat Satisfied
 - Neither Satisfied Nor dissatisfied
 - Somewhat Dissatisfied
 - Very Dissatisfied
 - I am not familiar with the current reporting system

10) Please indicate on a scale of 1-5 how much you agree or disagree with the following statements.

	N/A	1: Strongly disagree	2: Disagree	3: Neither agree nor disagree	4: Agree	5: Strongly agree
I know how electronically reported information is used.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electronically reported Information is used to make informed management decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electronically reported information used to determine season length.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting information is easy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting information takes minimal time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11) Please indicate how you think the South Atlantic Fishery Management Council should monitor recreational catch and effort for private recreational anglers. More than one answer may be selected.

- Through a mobile reporting app
- Through traditional paper log books
- Through an online electronic reporting portal
- Through the current recreational monitoring system
- I do not think private recreational anglers should report
- I do not have an opinion on private recreational reporting

Part 3:

12) How did you hear about MyFishCount?

- From a SAFMC email
- On social media (please indicate Facebook, Twitter, or other)
 - i. *There will be a text entry portion of this question to enter the social media type.*
- From a fellow angler
- From the SAFMC website
- Other (please specify)
- I did not hear about MyFishCount before this survey ▽

Note: The remaining questions users are asked in Part 3 depend on their response to Question 13. Symbols next to each response correspond to symbols next to remaining questions in Part 3. They are for reference only and won't be included in the final survey. There are different Likert scales for people who a) signed up and submitted, b) signed up but did not submit, c) did not sign up but were aware of MFC. Note that because some questions only apply to some of the survey population, the final number of questions will vary from group to group.

13) Did you make an account on the MyFishCount website?

- Yes, I made an account AND submitted a trip *
- Yes, I made an account but did NOT submit a trip ◇
- No, I was aware of MyFishCount but did not make an account °

14) Why did you choose not to submit a trip through MyFishCount? ◇

- I did not take a trip targeting red snapper after signing up for MyFishCount
- The submission process was too time consuming
- The submission process was confusing
- I forgot to submit my trip to MyFishCount
- Other (please specify)

We are very interested in understanding why people participated in reporting through MyFishCount during the 2017 red snapper mini-season. Please answer the following 7 questions regarding your own motivations to participate.

15) On a scale of 1-5, how important were each of the following in motivation your participation to report through MyFishCount? *◇

	1: Not at all important	2	3	4	5: Very important
Improving the quality of fisheries data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving my fishing experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving fishing for other anglers like me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improving fisheries for the enjoyment of all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning more about fisheries science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning about my own fishing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The opportunity to gain a new perspective on things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Benefiting scientists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contributing to original research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling part of the community of volunteer anglers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The chance to earn a reward or win a prize	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16) On a scale of 1-5, how important were each of the following in motivating your participation to report through MyFishCount? *◇

	1: Not at all important	2	3	4	5: Very important
Helping me in my chosen profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making new contacts that might help my career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling good about my contribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The attitudes of my friends and family regarding my participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enhancing my status in the fishing community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appreciation by others in my community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advancing the goals of the Angler Action Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Showing concern and compassion for others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making the world a better place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19) Please indicate on a scale of 1-5 how much you agree or disagree with the following statements. °

	N/A	1: Strongly disagree	2: Disagree	3: Neither agree nor disagree	4: Agree	5: Strongly agree
I feel that I understand the project goals behind MyFishCount.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider signing up for MyFishCount in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using MyFishCount will help further my interests as an angler.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data from MyFishCount will provide accurate data about the snapper grouper fishery.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information provided by the MyFishCount Red Snapper mini-season report issued by SAFMC was applicable to me as an angler.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20) How often would you use MyFishCount on future trips? *◇

- 100% of trips
- 75-99% of trips
- 50-74% of trips
- 25-49% of trips
- 1-24% of trips
- I would not use MyFishCount on future trips

21) What do you like most about the MyFishCount reporting platform? *◇

22) What do you like least about MyFishCount reporting platform? *◇

23) Are there any changes to MyFishCount that if implemented would make you use it more frequently? *◇

24) Is there anything specific that would encourage you to sign up for MyFishCount in the future? °

Part 4:

25) Are you affiliated with any angling clubs? Please, indicate below.

26) How many years have you been snapper grouper fishing?

27) Please indicate your State of residence.

- North Carolina
- South Carolina
- Georgia
- Northern Florida (indicate boundary)
- Southern Florida (indicate boundary)

28) Please indicate from which state you generally fish from?

- North Carolina
- South Carolina
- Georgia
- Northern Florida (indicate boundary)
- Southern Florida (indicate boundary)

29) What is your age

- Less than 25 years old
- 25-50 years old
- More than 50 years old

30) What best describes your gender?

- Male
- Female
- Not listed

31) Please provide any additional comments about MyFishCount and recreational reporting for snapper grouper in the South Atlantic.