

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, data collected from U.S. recreational fisheries are limited to a few surveys. The private recreational fishery is a significant component of the catch and harvest of snapper grouper species in the South Atlantic region; yet, data are limited on the number of participants catching snapper grouper species, number of trips, catch and harvest (number and weight), 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 management of recreational fisheries.

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 percent standard error (PSE), and annual catch limits (ACLs). High PSEs and low ACLs can ultimately result in closures and limited recreational access.

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 created a recreational snapper grouper electronic permitting and reporting app, MyFishCount. The app allows 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.

Purpose of Study

The purpose of this study is to provide the South Atlantic Fishery Management Council with an understanding of recreational snapper grouper fishermen, perceptions and opinions of recreational reporting that might influence angler behavior, and gain feedback on improvements and modifications to be applied to the recreational reporting app. 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 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 are modifications or improvements that can be made to the app?

Methods and Procedures

Overall Survey Design

Three surveys will be administered throughout this study. These surveys include an initial survey at the beginning of the app pilot project, 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, and acquire feedback on modifications and improvements that can be made to the app. In order to thoroughly investigate the attitudes and opinions of electronic recreational reporting that might influence angler behavior, 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 at determining factors that influence an angler's behavior. 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 (paper/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

- 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 small focus groups 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.

Initial Survey Research Questions

- 1) What is the level of recreational snapper grouper fishing effort and angler avidity in the South Atlantic for fishermen testing the app?
- 2) What are the attitudes, perceptions, and opinions of electronic recreational reporting that might influence an angler's behavior to electronically report?

Note: This initial survey will be aimed at understanding the attitudes, perceptions, and opinions of electronic reporting. The following surveys will investigate attitudes, perceptions, and opinions of electronic reporting through the mobile app, MyFishCount. The text in **Blue** in the survey below indicates each research question or the topics the survey questions are intended to investigate. The blue text also gives further context and notes for questions.

Initial Survey

This questionnaire is intended to provide information about the level of snapper grouper fishing effort in the South Atlantic and perceptions of private recreational electronic permitting and reporting. All information provided is valuable. The survey should take around 15 minutes. You can stop the survey at any time, and all answers will be kept confidential.

Questions

- 1) *What is the level of recreational snapper grouper fishing effort and angler avidity in the South Atlantic for fishermen testing the app?*
 - 1) In an average year, how many private recreational fishing trips do you take?
 - 1-5 trips
 - 6-10 trips
 - 11-15 trips
 - 16-20 trips
 - 21-15 trips
 - 26-30 trips
 - Greater than 30 trips
 - 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 targeted snapper grouper species for at least part of the time.
 - 1-5 trips
 - 6-10 trips
 - 11-15 trips
 - 16-20 trips
 - 21-15 trips
 - 26-30 trips
 - Greater than 30 trips

- 3) How often do you take trips that only target snapper grouper species?
- Almost always
 - Often
 - Sometimes
 - Seldom
 - Never
- 4) How often do you change your target species from or to snapper grouper species during a trip?
- Very frequently
 - Frequently
 - Occasionally
 - Rarely
 - Very Rarely
 - Never
- 5) Please indicate for an average year, the times of year you snapper grouper fish. Please check all that apply.
- Fall
 - Winter
 - Spring
 - Summer

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

Attitude Toward the Behavior Questions:

"Refers to the degree to which a person has favorable or unfavorable evaluation or appraisal of the behavior in question."

- 6) Please indicate your opinion of recreational reporting for private recreational anglers.
- Recreational reporting should be mandatory for private anglers.
 - Private recreational reporting should be mandatory for some but not all fisheries.
 - Recreational reporting should be voluntary for private anglers.
 - Private recreational reporting is not necessary for recreational fisheries.
 - My opinion of recreational reporting for private anglers is currently undecided.

- 7) Please indicate your level of satisfaction of the current recreational monitoring program 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 monitoring system.
- 8) Please indicate your opinion of recreational catch estimates provided by the current recreational monitoring program for snapper grouper species.
- Severely underestimates
 - Moderately underestimates
 - Accurately estimates
 - Moderately overestimates
 - Severely overestimates
 - Some estimates overestimate and some underestimate
 - I am not familiar with the catch estimates.
- 9) If given the opportunity to report private recreational snapper grouper trips would you be inclined to do so?
- Not likely
 - Somewhat likely
 - Very likely
 - I would not report
 - I would only report if there was a requirement to report
 - I do not have an opinion on recreational reporting.
- 10) Would electronically reported data improve estimates of private recreational catches?
- Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
 - Undecided

Subjective Norm:

“Refers to perceived social pressure to perform or not perform the behavior. Can be influenced by groups or individuals.”

11) Please indicate how each of the following would influence your decision to electronically report.

	Does not influence decision to report.	Slightly influences decision to report.	Somewhat influences decision to report.	Moderately influences decision to report.	Strongly influences decision to report.	I do not think I should report.
Knowing other anglers are reporting electronically.	0	1	2	3	4	5
Anglers I know are reporting electronically.	0	1	2	3	4	5
Regulations require me to electronically report.	0	1	2	3	4	5
Other anglers believe electronic reporting will improve management.	0	1	2	3	4	5
Companies or agencies I follow support electronic reporting.	0	1	2	3	4	5

Perceived Behavioral Control:

“Resources and opportunities that dictate the likelihood of behavioral achievement.”

12) Please indicate how each of the following would influence your decision to report.

	Does not influence decision to report.	Slightly influences decision to report.	Somewhat influences decision to report.	Moderately influences decision to report.	Strongly influences decision to report.	I do not think I should report.
Electronically reported data are used in stock assessments.	0	1	2	3	4	5
Electronically reported information is used to make informed management decisions.	0	1	2	3	4	5
Electronically reported information is used to determine season length.	0	1	2	3	4	5
Reporting information is easy to complete.	0	1	2	3	4	5
Reporting information takes minimal time (5 minutes per trip).	0	1	2	3	4	5

13) 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.

Sampling bias:

14) Why are you participating in this pilot program?

Optional questions

Demographics:

15) Are you affiliated with any angling clubs? Please, indicate below (Optional).

16) How many years have you been snapper grouper fishing? (Optional).

17) Please indicate your State of residence. (Optional).

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

18) Please indicate from which state you generally fish from? (Optional).

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

19) What is your age? (Optional).

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

20) Please provide any additional comments about recreational reporting for snapper grouper species in the South Atlantic.