

Decoding the Motivations of Fishers Considering Participation in Citizen Science Projects

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Pre-Research Presentation to the SEP

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Proposed Project

SAFMC Request:

- “study and document the interests, motivations, and concerns of fishermen who might participate in the SAFMC’s growing Citizen Science Program

Proposed Approach:

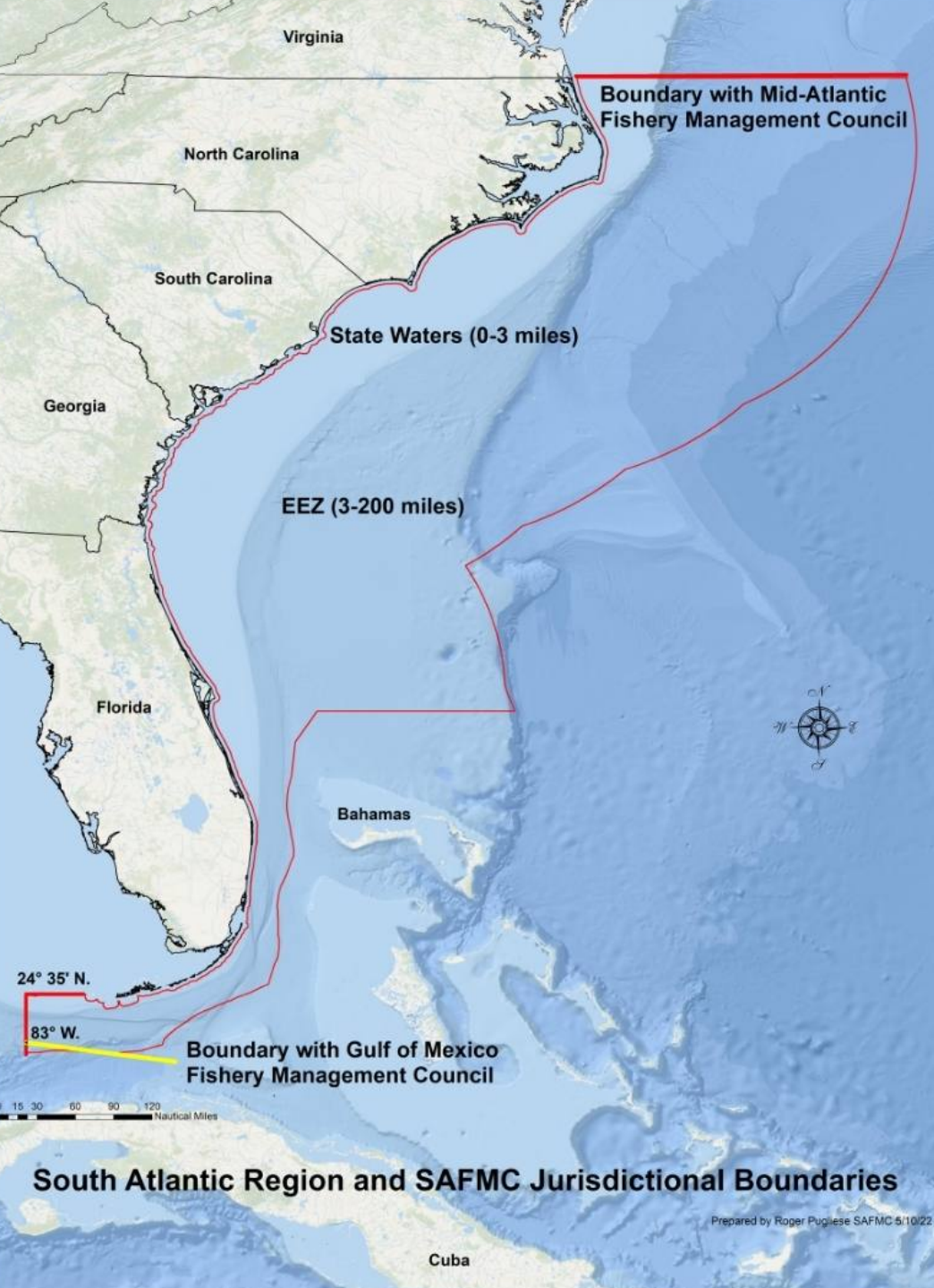
- Qualitative interview-based research strategy
- Tailored sampling & recruitment strategy → representative data gathering

Result:

- nuanced analysis of fishers’ reasoning surrounding their decision-making around participation in SAFMC citizen science efforts

Background Literature

- Understudied: role of trust in fisheries management
- Relationship between trust in management and impact on citizen science efforts is limited (Bonney et al 2021)
- Within fisheries management
 - Industry members with moderate levels of trust have highest levels participation in fisheries management (Yandle et al. 2011)
 - Institutional trust not monolithic
 - Varies by institution (Yandle et al, 2011, Grey et al., 2012)
 - Varies institutional scale (Yandle, Tookes, and Grace-McCaskey 2020).



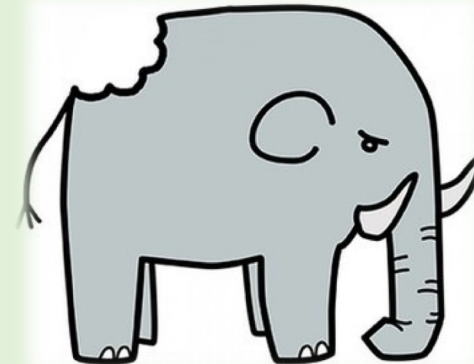
Specialized Sampling Frame

4 states

3 sectors

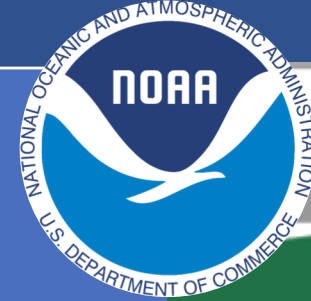
19 thousand commercial permits

Untracked recreational anglers



Commercial & For-Hire Sectors

NOAA South Atlantic Permit Database



19K





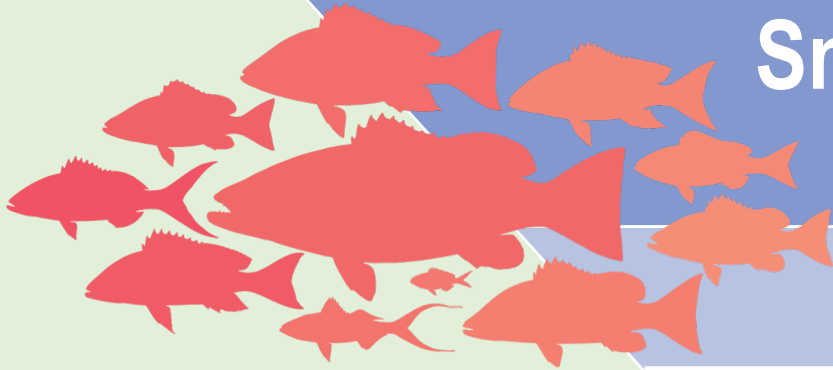
NOAA South Atlantic Permit Database

Non-Atlantic, No addresses, Companies

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Snapper/Grouper VS.
King Mackerel



	Snapper/ Groupers	Mackerels
Commercial Fishers	536	1237
For-Hire Fishers	1664	1635

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Snapper/Grouper VS King Mackerel

Fishing Communities by Landings



[Find A Species](#) [Fishing & Seafood](#) [Protecting Marine Life](#) [Environment](#) [Regions](#) [Resources & Services](#) [About Us](#)

SOCIOECONOMICS

Snapshots of Human Communities and Fisheries in the Gulf of Mexico and South Atlantic

Gulf of Mexico and South Atlantic Fishing Community Snapshots

[Southeast](#)

Oak Island, NC

Where is Oak Island located?

Oak Island has a population of 6,783 and is classified by the census as falling within an urbanized area. Rural to urban is really a continuum. Increasing urbanization indicates that a community has more jobs overall, more kinds of jobs, and more services like hospitals, social workers and job training centers. However, increasing urbanization can also mean greater pressure to transform working waterfronts for alternative uses, such as hotels or tourist shops.



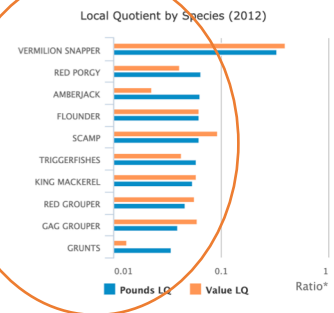
Involvement in Fisheries

What species are landed in Oak Island?

The landings associated with a fishing community tell us what species are important to that community. The diversity of species caught also is indicative of a community's ability to adapt to changing environmental conditions (e.g. populations of specific fish stocks) or changes in fishing regulations that restrict access to resources.

The local quotient (LQ) graph specifies the top species which were most important in terms of pounds landed and value out of all species landed within the community.

*Scale is logarithmic and although bars may seem close in value, they may actually be far apart. Hover over bars to see actual values.



What are the characteristics of the fishing vessels in Oak Island?

The number of fishing vessels in a given port provides a sense of the scale of fishing in that port. Where a large port may serve as the homeport for hundreds of vessels, a smaller one may only have a handful. The number of vessels also may provide a rough sense of the number of fishing-related jobs (e.g. crew positions, jobs in shoreside industries) available in a given location. In addition, the type (commercial or recreational) of fishing vessels provides a sense of the importance of that sector to

Number of Commercial Vessels by Size (2013)



NOAA South Atlantic Permit Database

Non-Atlantic, No addresses, Companies

Snapper/Grouper VS King Mackerel

Fishing Communities
Landings

Geographic
Segments



NOAA South Atlantic Permit Database

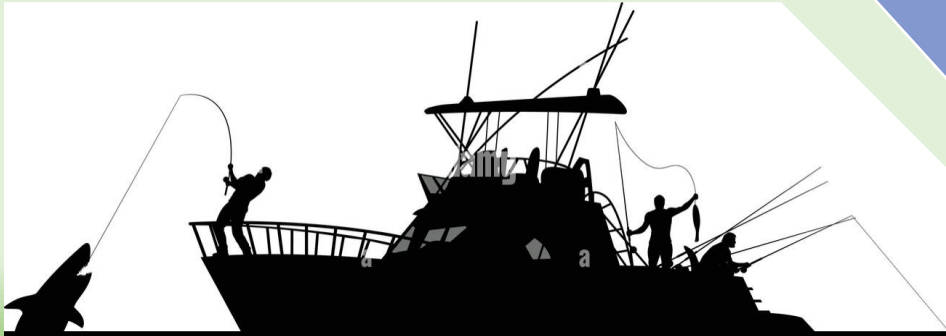
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Snapper/Grouper VS King Mackerel

Fishing Communities
Landings

Geographic
Segments

Randomized
Target
Participants



Recreational Anglers

- Focus on resident anglers with “demonstrated sustained interest”
- Define as being a member of an organization focused on recreational fishing
 - International Gamefish Association
 - Coastal Conservation Association
 - Other identified saltwater angler clubs



Targeted Recruitment

COMMERCIAL & FOR-HIRE

- Mailed postcards
- Phone number searches

No response after 2 postcards plus phone call= removal, move to next name

RECREATIONAL ANGLERS

- Fishing Organizations
 - Direct emails; announcement in newsletters or on social media
 - Organization suggestions

<i>Geographic Segment & Fishery Sector</i>	Commercial	Charter	Angler
<i>Segment 1</i>	3-5	3-5	3-5
<i>Segment 2</i>	3-5	3-5	3-5
<i>Segment 3</i>	3-5	3-5	3-5
<i>Segment 4</i>	3-5	3-5	3-5
Target Study Sample	12-20	12-20	12-20



Methodology

- Specialized research instruments
 - Drawing on Byrd & Bonney
 - Based in MARFIN and NOAA SK projects
- Semi-structured interviews
 - Phone
 - Zoom
 - In-Person visits (one per segment)
- Grounded theory
 - Inductive data analysis

Discussion Questions

1. Recommendations on alternative configurations for the geographic zones for the study? Other resources to determine where most King Mackerel and Snapper/Grouper currently being landed? (See Figure 1 and Table 2)
2. Regarding the angler sector:
 - a. Suggestions for enhancing randomization in sampling, especially considering the fundamental characteristics of the population are unknown?
 - b. Suggestions for additional strategies for recruiting in this sector?
 - c. Suggestions for contacts in fishing clubs or other fishing organizations?

Discussion Questions

3. Thoughts on likely preferences of participants for phone vs video vs in person by sector?

4. We plan for the interview guides to address themes of:

- attitudes to and willingness to work with management
- fishery conditions
- trust & well-being (social and economic)
- social networks

If time allows, are there any additional themes you would recommend we address?