Citizen Science

Citizen Science Program Update

Shrimp & Deepwater Shrimp AP
April 2024

Citizen Science Program

Why Citizen Science?

- Long standing data needs
- Fishermen want to help
- Citizen science provides the opportunity

Program Development

- 2016 workshop & blueprint
- Stakeholder Action Teams
- Program approach & SOPPS

Advancing science and increasing trust, one project at a time

SAFMC Citizen Science Program Approach

- Fill data gaps & address research needs

- Complement existing programs & partnerships – *NOT compete or replace*

- Intentional project design - *direct application/use in management and stock assessments*

- Fishermen & Scientist collaboration

- Umbrella to support projects – internal & external

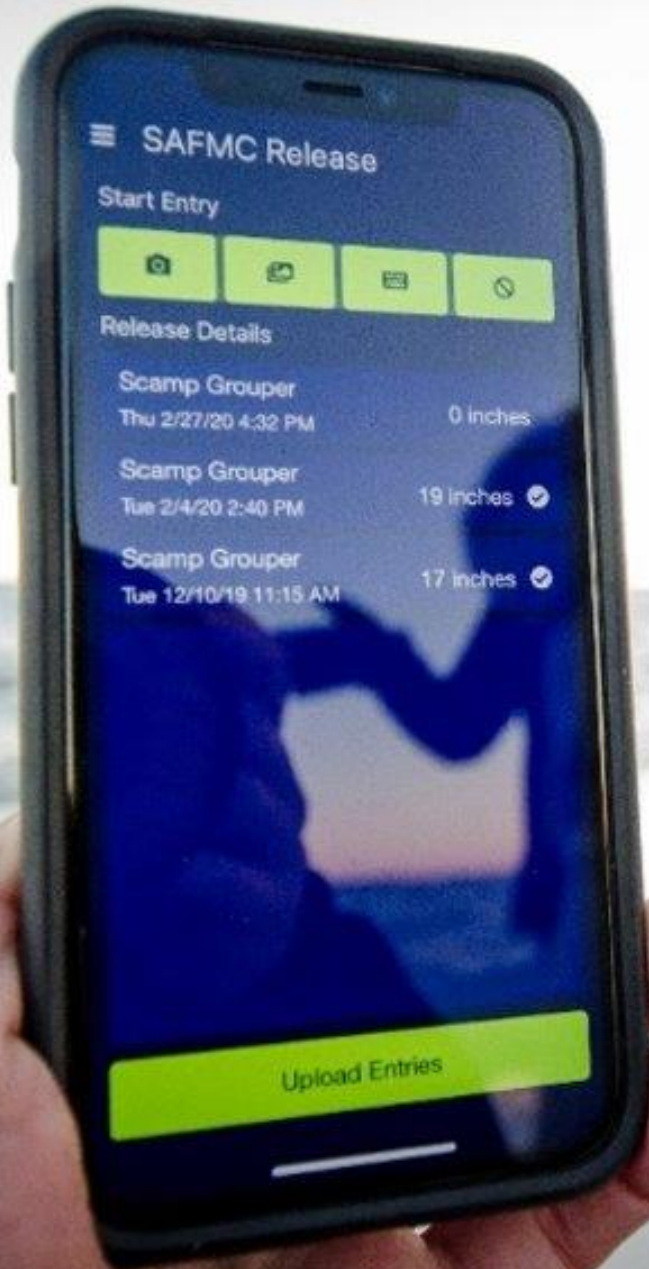# SAFMC Citizen Science Research Priorities

2023-2025

Topic	Data Needed	Potential Outcome
Age Sampling	Otolith & fin clip (future) collection	Characterize the age of catches
Discard Information	Length, depth, quantity, discard reason, devices used, terminal gear, disposition	Characterize the size of discards, Improved discard removal estimates
Genetic Sampling	Fin clips	Stock identification, Species ID, Ageing (still developing)
Fishing Infrastructure	GPS location and details of fishing-related infrastructure	Baseline for fishing-related infrastructure, help better define communities for social analysis
Historical Fishing Photos	Digitized images	Species and length compositions, improved historical information
Fishery Oral Histories & Historic Logbooks	Fishermen interviews, digitized logbooks	Improved understanding of changes in fishery over time
Oceanographic & Environmental Conditions	Various environmental data including bottom temperature and weather	Database of climate and changing conditions, fishery patterns
Shifting, Rare or Data Limited Species Observations	Point observations of data limited or rarely encountered species; length info for data limited species	Baseline for species shift, increased information for data limited species
Observations in Managed Areas	Species, length, depth, videos, photos, effort, edge effects	Species composition, occurrence of spawning, info on compliance
Movement & Migration	Species, location, length, tag details, supporting existing tagging programs	Movement and migratory patterns
Shark & Mammal Depredation	Observations of depredation, location, species, photo, DNA swab	Document depredation observations
Habitat Characterization	Photos, videos - focused on EFH	Ground truth bathymetry data
Spiny Lobster Data	Catch, effort, length, sex, presence of eggs, presence/absence	Characterize fishery in FL and GA north (more data limited)

PC: REEF
PC:Tom Sparke
PC: REEF

SMILE Project

- Partner with divers to collect length info on data limited species
- Laser-mounted Olympus underwater cameras
- Field testing in FL Keys
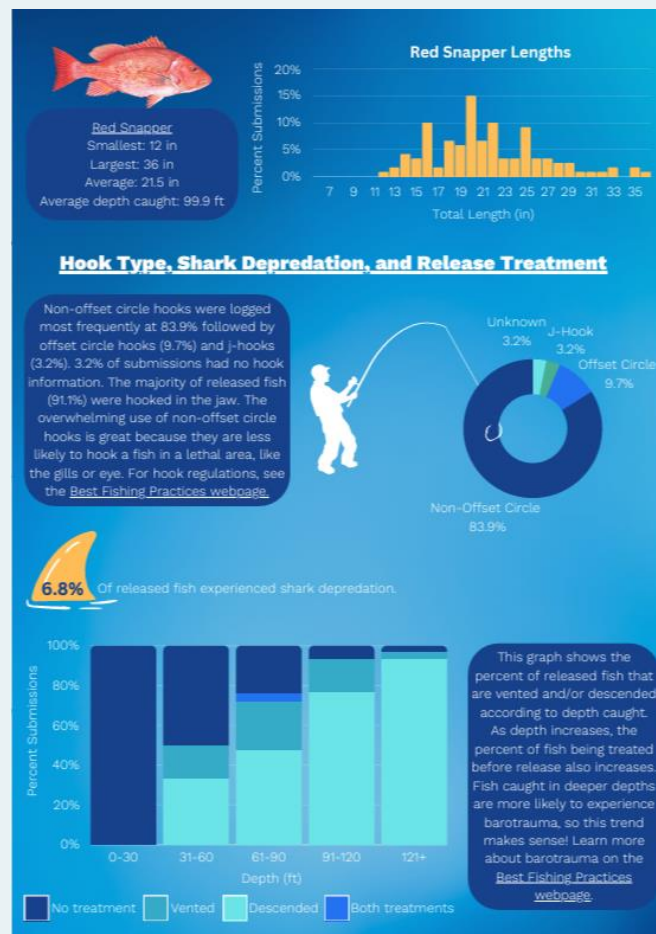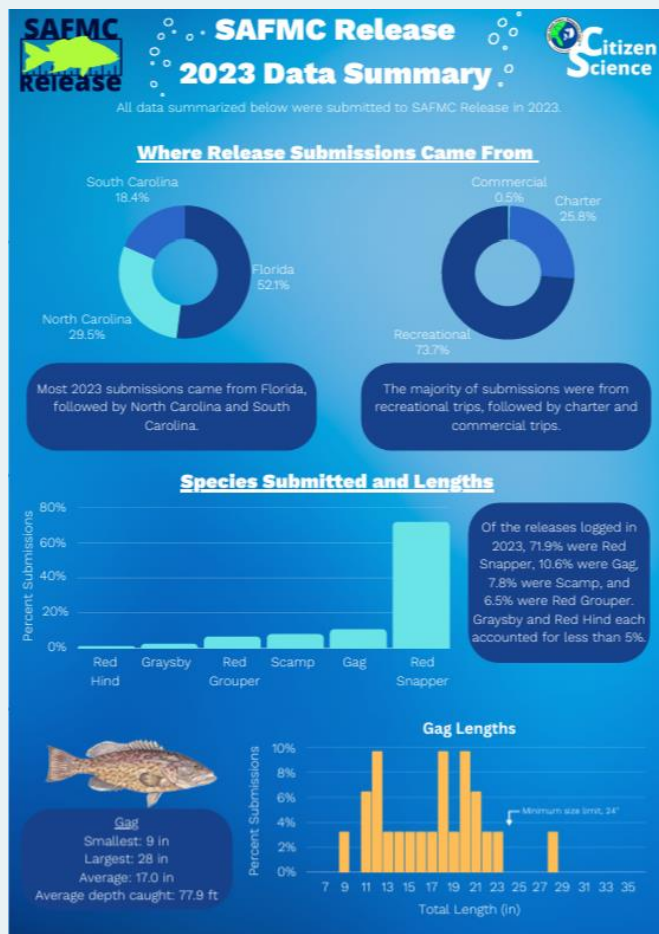- Data analysis underway for first field season

REEF
Reef Environmental Education Foundation

Citizen Science

SECOORA
Southeast Coastal Ocean Observing
Regional Association

SAFMC Release

2023 Data Summary

Summary includes:

- Release submissions by state & fishing sector
- Species submitted
- Length compositions
- Release treatment by depth
- Shark depredation
- Hook type & location
- 2023 Participant Recognition Milestones

safmc.net/documents/2023-safmc-release-data-summary-final/

DAYTONA BEACH

CAUGHT AT INLET HARBOR

BOAT PAPOOSE

CAPT. VAN EPP

DAYTONA BEACH FLA.

CAUGHT AT INLET HARBOR

6 23 72

Caught aboard

SNOW WHITE II

with

Capt. AL KLINE

Mates - Kevin & Bill

ICE CRUSHED

FISHstory

FISHstory

A SAFMC CitSci Project

Citizen Science

Project Components

Digitizing & archiving historic fishing photos

Estimating for-hire catch composition using the online crowdsourcing platform Zooniverse

Developing method to estimate fish length in historic photos and estimating size composition for key species

Pilot Project Findings

1,374 photos were digitized & archived from Daytona Beach, FL from the 1940s-1970s

Over 2,120 volunteers analyzed 1,000 photos
Validation Team reviewed 180 photos
Data can show trend for key species

All King Mackerel were measured in the photo archive
Length compositions were produced

Gathering New Photos

- Goal: Collect historic fishing photos from across the South Atlantic region from the 1940s – 1980s for the FISHstory project

In 2023, 6 scanning events were held via Council related meetings

AP & Council members helped connect us to others in their communities

Members of the public reached out after seeing information via Council communication channels

FISHstory: Photos for Analyses

Photo Description	Good	Better
Photo Type	Picture taken at the end of a trip displaying harvested catch with anglers	Fish hanging on leaderboard
Photo Date	Year	Month & Day
Photo Location	State	City & Dock
Photo Background	Photo provider name & contact	Vessel name & captain name

© Judy Helmey

Good

Picture taken at end of trip displaying harvest with anglers

Year

State

Photo provider name & contact

Better
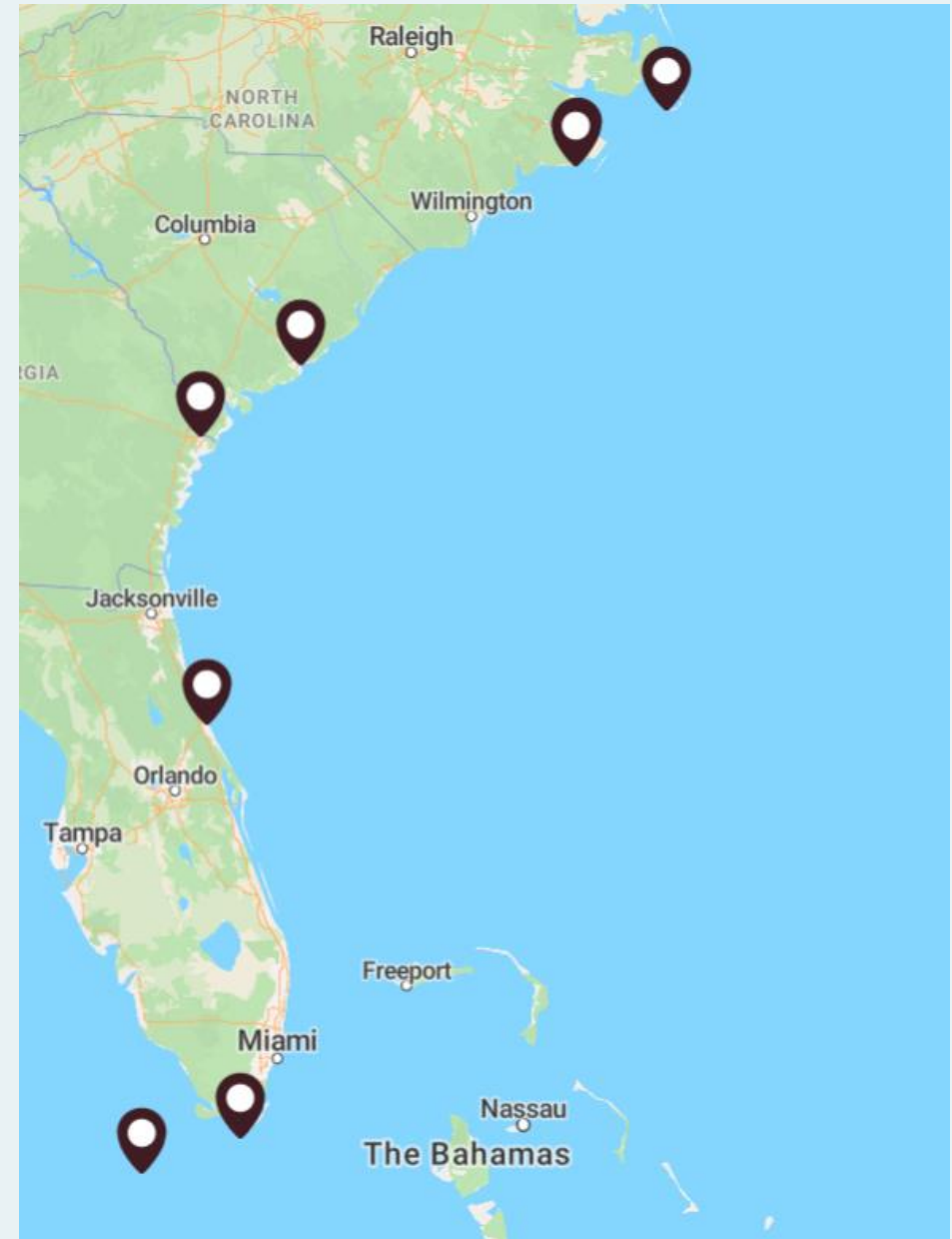
Fish hanging on leaderboard

Month

City & dock

Vessel name & captain name

FISHstory Photo Locations

Share a project idea via the Citizen Science Project Idea Portal!

Ideas will be used to update the Citizen Science Research Priorities & to help connect fishermen and scientists with similar research interests

Citizen Science Advisory Panels

- Participants members of the [CitSci Pool](#) and/or be a member of another Council AP

Operations Committee
Programmatic guidance
3-5 year terms
Meet 2 times per year
Appointments will be made in Dec 2023

Projects Advisory Committee
Research priorities, volunteer engagement, etc.
Members of other Council APs
Term dependent on AP tenure
Meet 1 time per year

Ad-hoc Committees
Typically serve as review for program components
Currently no active ad-hoc committees

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Need Shrimp AP representatives!

Keep up with projects & the Program!
safmc.net/citizen-science-program/

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