

FY21/22 - SAFIS Expansion of the SciFish Customizable Fisheries Citizen  
Science Data Collection Application

Progress Report: June 2022 - November 2022

Submitted By:

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**Report Title:** FY21/22 - SAFIS Expansion of the SciFish Customizable Fisheries Citizen Science Data Collection Application

**Recipient Organization:** South Atlantic Fishery Management Council (SAFMC) & North Carolina Division of Marine Fisheries (NCDMF)

**Principal Investigators (PIs):** Julia Byrd and Brandi Salmon

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**Grant Summary:**

This project continues and builds on the work done under the ‘FY20: SAFIS Expansion of *SAFMC Release* and NCDMF *Catch U Later* Discard Reporting Applications’ grant and is a continuation of the ‘FY21: SAFIS Expansion of the Customizable Fisheries Citizen Science Data Collection Application’. As such, this progress report will include information on the objectives within the FY21 and FY22 proposals. The FY20 project combined two separate discard reporting applications, *SAFMC Release* and NCDMF *Catch U Later*, under a new Atlantic Coastal Cooperative Statistics Program (ACCSP) citizen science mobile application, SciFish; expanded the *SAFMC Release* project from collecting data on just Scamp Grouper to all shallow water grouper species (Red, Gag, Black, Scamp, Yellowfin and Yellowmouth Groupers; Red Hind; Rock Hind; Coney and Graysby); and held a series of scoping meetings to develop a roadmap for next steps in the development of the SciFish platform (customizable mobile app and project builder interface). The FY20 project finished in mid-August 2021 with the deployment of the initial version of the SciFish application with the *SAFMC Release* and NCDMF *Catch U Later* projects. During FY21, data collection and outreach continued for *SAFMC Release* and *Catch U Later*; Red Snapper was added to the *SAFMC Release* project; development of the SciFish project builder and customizable app prototype got underway; and initial groundwork was done to support the development of SciFish policies and procedures.

The primary objectives of this project are to:

- Continue data collection under the ACCSP citizen science app, SciFish, via the *SAFMC Release* and NCDMF *Catch U Later* projects and expand the species that can be reported.
- Continued development and construction of SciFish, a customizable fisheries data application, to standardize data collection, increase data availability, and reduce the need for future and existing projects to invest additional costs in individual applications.
- Expand the data collection fields available in the customizable app both within and beyond discard reporting to support development of citizen science and other non-traditional data collection projects among partners.
- Develop policies and procedures needed for partners to build and support projects within the SciFish mobile application.
- Pilot policy and procedure development with two additional projects: 1) the North Carolina Division of Marine Fisheries *Tagging Program* which seeks to better evaluate the migration, growth, habitat use, and population status of multiple species and 2) University of New England

(UNE) *Mail-a-Scale* which seeks to expand current data collection of recreationally caught striped bass in Maine.

To accomplish the objectives, work has been divided into six primary tasks outlined below. One unique task remains from the FY21 project (SAFMC Release survey). The remaining FY22 tasks build on similar tasks from the FY21 project, with the exception of Task E (development of SciFish policies and procedures) which is new to the FY22 project.

**FY21 - Task A: SAFMC Release Survey**

Work with a contractor/graduate student to conduct a survey of *SAFMC Release* participants to get feedback on the *SAFMC Release* app. Survey results will help inform design of the app and improve volunteer engagement.

**FY22 - Task A:** Move the SciFish platform prototype (application and project builder interface) developed from the FY21 project from beta test into production. Explore the incorporation of additional features identified during FY20 project scoping meetings that could help with participant recruitment and retention (e.g. weather).

**FY22 - Task B: Public Outreach (SAFMC and NCDMF)**

- Recruit new participants in the existing projects, *SAFMC Release* and NCDMF's *Catch U Later* and expand participation for the new species.
- Apply engagement strategies to retain current participants in both projects.
- Notify ACCSP partners when new versions of SciFish are available.

**FY22 - Task C: SAFIS Application Deployment (ACCSP)**

- SAFIS SciFish application will be deployed.
- Reports are currently available in Data Warehouse to view/download data.

**FY22 - Task D: Data collection, QA/QC, and analysis (SAFMC, NCDMF, & UNE)**

- Data successfully submitted via app to SAFIS/Data Warehouse.
- SAFMC, NCDMF, & UNE provide QA/QC for data collected through their projects; edit/correct as necessary.
- Data made available for assessment and management, as necessary.
- Continue to explore long term solutions for addressing QA/QC and validation needs of the data (e.g. photographic and species identification), considering volunteers and citizen science approaches.

**FY22 - Task E: Development of policies and procedures for use of the ACCSP SciFish Platform**

- Engage ACCSP leadership to outline a process to develop policies and procedures for partners who want to utilize the SciFish platform.
- Organize a design team including SAFMC, NCDMF, UNE, ACCSP, Harbor Light Software, ACCSP committee representatives, and other interested parties to develop policies and procedures via

a series of virtual meetings. The NCDMF *Tagging Program* and UNE *Mail-A-Scale* projects will be used to inform and pilot the procedures developed.

**Summary of Progress:**

Although the SAFMC and NCDMF are the PIs on the FY22 project, participation from other partners in the development of the SciFish platform has continued from the FY20 / FY21 projects. The SciFish organizing committee from the FY20 scoping meetings (includes representatives from SAFMC, NCDMF, ACCSP, Harbor Light Software, Georgia Department of Natural Resources, and Rhode Island Division of Marine Fisheries) has continued to be involved in the development of SciFish working on policy development under Task E. Progress updates are summarized by task within this report.

**FY21 - Task A: SAFMC Release Survey**

Guidance on how the SAFMC operates in regard to the Paperwork Reduction Act has recently changed which will impact the timeline to develop and implement a SAFMC led survey of SAFMC Release participants. To address this task, the SAFMC will be developing a draft survey questionnaire and start the submission process for PRA review and approval. Survey implementation will occur after the PRA process is complete.

**FY22 - Task B: SciFish Customizable Mobile Application and Project Builder Interface Development & Testing**

Technical development activity by Harborlight Software and ACCSP are highlighted below.

Technical development activity during the reporting period addressed enhancements to the SciFish mobile application and to the project builder interface application.

SciFish mobile application development focused on integrating the SciFish mobile application with the Project Builder Interface. During this period, product development prototyped importing new projects created by the Project Builder into the SciFish mobile application.

Scoping and planning for expansion of the database structures and API was completed.

**FY22 - Task B: Public Outreach**

During the reporting period, the following outreach activities have been conducted for the *SAFMC Release* project.

- SAFMC staff printed *SAFMC Release* wallet card, stickers, and rack cards to distribute for project promotion and recruitment.
- Staff updated the *SAFMC Release* [project webpage](#) to be more engaging and aesthetically pleasing.
- Staff started sending out a monthly e-newsletter to participants in June 2022. Newsletters include a variety of topics including participant and submission highlights, summary info from logged data, and information on best fishing practices to help increase survivorship of released fish.
- Social media content was developed for the project and 10 *SAFMC Release*-focused posts have been shared via the Council's social media platforms (Facebook, Twitter, and Instagram).

- Staff gave presentations on the SAFMC Citizen Science Program, including updates on the *SAFMC Release* project at the June 2022 SAFMC meeting and at the Outreach and Communications, Mackerel Cobia, and Snapper Grouper Advisory Panel fall 2022 meetings.
- An outreach team, consisting of SAFMC staff partnering with the South Atlantic Sea Grant Reef Fish Fellow, was created to work on *SAFMC Release* and Best Fishing Practices outreach efforts. Efforts during the reporting period are highlighted below.
  - The team visited 43 tackle shops, marinas, and fish houses (13 in NC, 7 in SC, 5 in GA, and 18 in FL) to begin developing relationships with these businesses. During these visits they shared information on *SAFMC Release* and the Best Fishing Practices campaign and distributed project promotional materials.
  - Staff collaborated with the best fishing practices initiative by participating in a charter trip in August 2022 with Good Times Sportfishing and local writers in Hatteras, NC. Staff developed a *SAFMC Release* and Best Fishing Practices media toolkit to share with participating writers who were encouraged to share information on these initiatives with their audiences.
  - Staff collaborated with SCDNR in their series of Charter Guide Summits held in August 2022, sharing information on *SAFMC Release* and best fishing practices with participating captains.
- The SAFMC had a booth at the ICAST recreational fishing trade show in July 2022. The booth featured Best Fishing Practices and the *SAFMC Release* project. Staff planned, designed materials, and manned this booth during the trade show.
- Through outreach efforts 37 new *SAFMC Release* accounts were created during the reporting period.

During the reporting period, the following outreach activities have been conducted for the NCDMF's *Catch U Later* project.

- In August 2022, staff sent a thank you letter to all Catch U Later Participants to encourage app usage. The letter included a koozie for everyone who signed up, and a fishing towel for anglers who have submitted catch records.

Additionally, many ACCSP partners have expressed interest in learning more about SciFish and potentially developing new projects within the application once it is available to other partners. Project partners, working with the SciFish Organizing Committee, began to draft a one-page SciFish overview document that can be shared with interested parties. Members of the organizing committee have also given SciFish overview presentations to ACCSP's Recreational Technical Committee, ASMFC's Red Drum Technical Committee, and Maryland's Task Force on Recreational Data.

#### **FY22 - Task C: SAFIS Application Deployment**

Development of the SciFish platform (customizable application and project builder interface) is currently underway. Deployment of the platform will occur after development and QA/QC of the prototype is complete. The project builder component will be made available to other partners after the SciFish policies and procedures are developed.

#### **FY22 – Task D: Data Collection, QA/QC, and Analysis**

- SciFish has been downloaded 194 times via the Apple Play Store or Google Play store in 2022.

#### *SAFMC Release*

- 29 individual participants have submitted 149 records to the ACCSP data warehouse since the start of the project.
- Approximately 75% of the release records used the GPS functionality of the application.
- QA/QC to validate logged records is accomplished by SAFMC staff; staff follow up with participants to verify any unusual submissions.
- Data will be provided for SAFMC assessments and management, as requested.

#### *NCDMF Catch U Later*

- 25 participants have submitted 158 records to the ACCSP data warehouse.
- 4 or 2.4% of records were not usable due to no photograph being uploaded. (Photos are a required data field for *Catch U Later*.)
- 116 records or 73.4% used the GPS functionality of the application.
- QA/QC to validate the species reported will be accomplished by NCDMF staff. Due to staff turnover and vacancies, photo validation is still in progress.
- Submitted data are directly applicable to the management of flounder. Specifically, the NCDMF seeks consideration of conservation equivalencies for Summer Flounder by the Mid-Atlantic Fisheries Management Council

#### **FY22 – Task E: Development of SciFish Policies & Procedures**

- The SciFish organizing committee held a virtual meeting with ACCSP Leadership in June 2022 to lay the groundwork for SciFish policy development. ACCSP leadership was supportive of draft policies being developed by the existing SciFish organizing committee with the potential addition of interested members from existing ACCSP committees.
- Lauren Dolinger-Few (NOAA Fisheries and ACCSP Operations Committee member) was added to the SciFish organizing committee to contribute to SciFish policy development.
- The SciFish organizing committee began work on policy development, meeting 6 times during the reporting period.

#### **Project Challenges & Opportunities**

- The *SAFMC Release* Project Coordinator funded through this grant moved into another position with the SAFMC in April 2022. A new Project Coordinator was hired and started June 27, 2022.
- The NCDMF PI for this project left the agency for a position with NOAA in Sept 2022. NCDMF is in the process of hiring a replacement. Brandi Salmon is serving as the co-PI in the interim.
- Guidance regarding how the Council operates in regards to the Paperwork Reduction Act has recently changed which will impact the timeline to develop and implement a SAFMC led survey of SAFMC Release participants. To address this task, the SAFMC will be developing a draft survey questionnaire and start the submission process for PRA review and approval. Survey implementation will occur after the PRA process is complete which may be after the completion of this project since the PRA review process can be lengthy.
- The SAFMC has been able to work with several agencies and organizations to conduct outreach for the *SAFMC Release* project. We are extremely grateful to NCDMF, Sea Grant and the Reef Fish Fellow, and SCDNR personnel for helping share information about the project with their stakeholders. Partnering with these groups is helping us reach a much broader audience than SAFMC Citizen Science staff would be able to do on their own.

- Participation has continued from partners involved in the initial 'FY20: SAFIS Expansion of *SAFMC Release* and North Carolina Division of Marine Fisheries (NCDMF) *Catch U Later* Discard Reporting Applications' project. Organizing committee members from the FY20 scoping meetings have continued their involvement in the next stage of SciFish development. Having several agencies involved in the continued development of the SciFish platform will help ensure the final product better meets ACCSP partner needs.

**Expenditures**

An additional year of this project was successfully funded in FY22. The FY22 award was obligated as a continuation of funds. As such, the FY21/FY22 expenditures are summarized together in the table below.

<b>Expense Category</b>	<b>FY21 / FY22 Grant Total</b>	<b>Expenditures through 12/1/2022</b>
Personnel	\$93,920	\$45,352
Travel	\$7,700	\$2,703
Other / Supplies	\$8,360	\$3,338
Indirect	\$10,994	\$5,432
<b>TOTAL</b>	<b>\$120,974</b>	<b>\$56,825</b>

Personnel and travel costs have been less than anticipated due to turnover within the *SAFMC Release* Project Coordinator contract position. Individuals serving in this position have moved into other positions with the Council during the course of this project. The *SAMFC Release* project was without a Project Coordinator from April - late June 2022. Additionally, by partnering with the SAFMC's Best Fishing Practices campaign and the Sea Grant Reef Fish Fellow on outreach initiatives, we have also been able to leverage our resources allowing us to spend less travel funding on outreach efforts than anticipated during the reporting period. The PIs anticipate potentially needing to request a no-cost extension for this project due to the Project Coordinator turnover.