SAFMC Citizen Science Program Blueprint Proposal

Prepared by the SAFMC Citizen Science Planning Workgroup, based on recommendations of the SAFMC Citizen Science Workshop

Program Identity

A. Program Official name: South Atlantic Fishery Management Council Citizen Science Program

B. Brief name: The program will be branded using a shorter name that could possibly form a catch acronym or other brief name to refer to the program. This will be developed by the Operations Committee.

C. Mission Statement:
"Improve fisheries management through collaborative science"

D. Vision Statement:
"more collaboration + more data + more trust = better management"

E. Values:

- empower
- include
- engage
- respect
- reliable
- trust
- mutual

F. Definition of "Citizen Science" for the Program: The definition of citizen science for this specific program is yet to be defined. Establishing a definition for the program will be one of the first tasks charged to the Operations Committee and Oversight Board.

Goals & Objectives

The planning workgroup drafted preliminary potential goals for a citizen science program that will be modified once the program launches and development begins. Specific objectives will be developed in coordination with the program A-Teams and reviewed by the Operations Committee.

GOAL 1: Adopt and sustain a new approach to increase the data available to address research and management needs.

- *Objectives should consider all aspects of fisheries including fish, fishery, ecosystem, fishermen.*

GOAL 2: Ensure data collected are appropriate, relevant, reliable, accessible, timely and useful.

GOAL 3: Build partnerships for mutual learning and collaboration.

GOAL 4: Enhance stewardship for the resources of the South Atlantic.

GOAL 5: Foster active engagement and communication about processes, results and impacts.

- *Objectives should consider strategies for providing feedback on usage, collection*

Administration

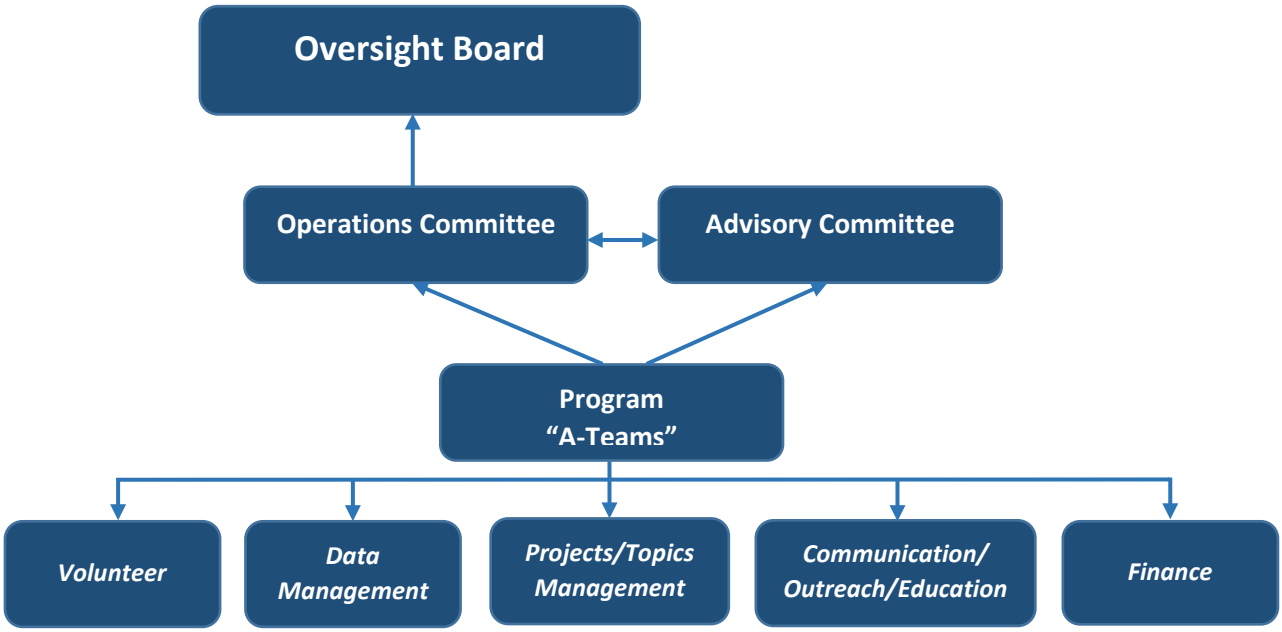
A. Parent/administrative support organization: SAFMC

B. Transition Strategy (*development to implementation*):

- Existing organizing committee will handle oversight tasks until planned infrastructure is in place and ready to take the reins.
- Anticipate 12-18 months before fully transferred, with the clock starting once funding is secured and initial staff is hired.
- Tasks will be delegated to other infrastructure components as they are developed and brought on line.
- Organizing Committee members are expected to continue to serve key roles in various bodies of the permanent infrastructure.

C. General overview and hierarchy

Citizen Science Program Organizational Chart



D. Roles & Operations – *Program Administration Hierarchy*

1. Oversight Board

Design/ Purpose	•Similar to SEDAR Steering Committee or ACCSP Coordinating Council •Approve policies, provide program direction/multi-partner support, and advice
Membership	•Representatives from SERO; SEFSC; NOAA Headquarters, Sea Grant (rotating), SAFMC (Chair, Executive Director, and SSC Chair); Stakeholders (private, for-hire, commercial); ACCSP/ASMFC; State agency; Advisory Committee Chair
Appointments	•Council appointed: *Stakeholders(3); NGO; Sea Grant; At-large; SSC Chair; State agency; AP Chair* •Designated by agency: *SERO, SEFSC, S&T, ACCSP/ASMFC* •Named individuals may designate temporary or permanent proxies
Tasks	•Approve program policy (SOPPS), goals, and objectives (*Developed by staff & Operations Committee*) •Approve program budget (*Developed by staff; recommendations from A-Teams*) •Provide infrastructure & governance direction (*through SOPPS & program evaluation*) •Meets annually (face-to-face); Additional meetings in first 2-3 years of program
Staff Support	•Citizen Science Program Manager (*supervised by SAFMC Deputy Director for Science & Statistics*)

RECOMMENDATION: Establish a Citizen Science Program Oversight Board.

2. Operations Committee

Design/ Purpose	•Smaller group of advisors that develop program recommendations for the Oversight Board to consider •Approve policies, provide program direction/multi-partner support, and advice
Membership	•Representatives from Citizen Science Organizing Committee (2 Council members, SEFSC Director/Designee; Council Staff (Deputy Dir for S&S); NGO); A-Team Leaders; SSC (Chair or Designee)
Appointments	•Appointed by the Oversight Board •Term policies would be developed by the Oversight Board to govern membership
Tasks	•Establish A-Teams immediately (topic specific task forces) •Coordinate with A-Team Leaders •Report A-Team recommendations to the Oversight Board •Draft SOPPS and policies for Oversight Board approval
Staff Support	•Citizen Science Program Manager (*supervised by SAFMC Deputy Director for Science & Statistics*)

RECOMMENDATION: Establish a Citizen Science Program Operations Committee.

3. Advisory Committee

Additional standing committees may be added over time to assist with specific programmatic needs related to projects supported through the citizen science program. Committees to coordinate proposal review and other technical/data needs are examples of possible standing committees that may be convened in the future.

Design/ Purpose	•Serve in the role of advisors similar to the Council's Advisory Panels •Works in conjunction with the Operations Committee to develop recommendations for the Oversight Board
Membership	•Fishermen (private, for-hire, commercial) and scientists •3 stakeholders per state
Appointments	•Appointed by the Operations Committee •Nominated by partners •Term policies would be recommended by the Operations Committee and approved by the Oversight Board to govern membership
Tasks	•Serve as outreach ambassadors •Assist with developing strategies for recruiting and training volunteers •Identify research and data needs •Serve in some capacity during the proposal review process
Staff Support	•Citizen Science Program Manager (*supervised by SAFMC Deputy Director for Science & Statistics*)

RECOMMENDATION: Establish a Citizen Science Program Advisory Committee

4. A-Teams

The A-Teams are task forces that will be developed during the initial launch of the citizen science program to help develop program components as outlined below.

Volunteers

Team will consider

- **Recruiting/Retention**
- **Training:** *delivery, skills certification, continuing*
- **Incentives:** *tangible/ intangible, data sharing, accessibility*
- **Role in project ID & research needs**
- **Expectations:** *participation, communication, feedback, data results and usage, building sense of ownership in program*

Communication-Outreach-Education

Team will consider

- **Approaches & Tools:** *programmatic, projects/ results, and to participants*
- **Media Plan:** *Branding/PR*
- **Feedback-Recognition Plan**
- **Training Plan:** *approaches, tools, methods*
- **Newsletters/Reports:** *program and projects*
- **Technology Platforms:** *web-based, social media role, others*

Data Management

Team will consider

- **Managing entity?**
- **Data Life Cycle**
- **Data Policies:** *collection standards, QA/QC*
- **Access:** *confidentiality and ownership*
- **End-user citations**
- **Validation**
- **Use guidelines:** *agreements and waivers*
- **Infrastructure:** *entry, storage, housing, database*
- **Electronic tools**
- **Data documentation:** *obtaining and managing*
- **Applicable data standards:** *IQA, NS2*
- **Platforms for data**
- **Presentation & marketing**

Finance

Team will consider

- **Administrative funding:** *short-/long-term sources, budget*
- **Project funding:** *sources, partnerships for receiving, disbursing, managing funds*

Projects-Topics Management

Team will consider

- **ID topics/research needs**
- **Application process**
- **Approving/endorsing projects:** *pre-review process, review entity, revising*
- **Prioritization of needs**
- **Selecting projects for support, endorsement**
- **Soliciting ideas**
- **Outlining project expectations:** *Goals and Plans for Data, Volunteers, Communication, Project Promotion, and Science Methods/Deliverables*
- **Training for science methods in citizen science**
- **Evaluation of projects:** *performance measures of success*

RECOMMENDATION: Establish five (5) A-Teams to develop program components. *Others maybe added based on the advice of the Operations Committee.*

Partnerships

The aim of a Citizen Science program would be to complement existing programs with similar missions and leverage new resources and partnerships to expand upon the fishery data needs in the region. Possible partnership opportunities were identified with existing programs and agencies. Developing relationships would likely be mutually beneficial to the entities involved. Potential benefits from partnering with the Citizen Science Program could include: identifying research and data needs; improving constituent knowledge, involvement, and buy-in; having better data to address management issues; increasing data gathering capacity; and helping to resolve long-standing data needs. Potential partners are listed below along with support they could potentially provide to a Citizen Science Program.

Sea Grant

- **Identify data and research needs**
- **Source of capacity**
  - *Program management*
  - *Program manager support & advice*
  - *Volunteer management (recruiting & training)*
  - *Outreach assistance*
- **Potential funding**: *source, funding partnerships, donation management*
- **Infrastructure committee members at all levels**
- **Program development recommendations**

NMFS

- **Identify data and research needs**
- **Source of capacity**
  - *Program and project management*
  - *Scientific (e.g. design, analysis)*
  - *Volunteer management (recruiting & training)*
- **Data QA/QC**
- **Program funding**
- **Infrastructure committee members at all levels**
- **Help ensure CS addresses national mandates and recommendations**

ACCSP

- **Potential partner for data warehousing and management**
- **Potential funding source**
- **Infrastructure committee members at all levels**

Fishery Information Networks (FINS)

- **Serve as another model for data management**

(Continued)

(Partnerships continued)

State Agencies

- **Identify data and research needs**
- **Source of capacity**
  - *Project management*
  - *Scientific*
  - *Volunteer management* **(***recruiting & training)*
- **Potential funding partnerships**
- **Project managers and partners**
- **Infrastructure committee members at all levels**

SAFMC

- **Administrative parent**
  - *HR, staff management*
  - *Office space*
  - *Program support, funding*
- **Program guidance & direction**
- **Identify data and research needs**
- **Source of capacity**
- **Infrastructure committee members at all levels**

Non-Governmental Organizations (NGOs)

- **Source for capacity building**
- **Identify data and research needs**

Cooperative Research Program *(CRP- federal grant program)*

- **Potential benefits from CS**
  - Promote awareness of CRP
  - Connect citizens and researchers interested in CRP projects
- **Potential benefits to SAFMC**
  - Increase benefit from CRP to SAFMC issues
  - Recommend CRP priorities

RECOMMENDATION: Expand existing partnerships with the identified agencies and programs and build collaborative relationships with newly identified agencies and programs.

Paid Staff

To ensure success, dedicated, full-time staff will be required for both initial program development and long-term support. Initially, a program manager is recommended to develop the infrastructure, initiate training and outreach, and support initial projects. The program manager will be a SAFMC employee within the science and statistics branch.

Dedicated managers for individual projects will be required as projects expand in number or complexity. Such positions could be filled by partner staff, well-trained and motivated volunteers, or dedicated program staff if resources and need allow.

Immediate tasks for the Citizen Science Program manager include,

- Inventorying current marine citizen science efforts;
- Organizing and populating program infrastructure;
- Serving as the point of contact for the program and interested volunteers; and
- Pursuing administrative and project funding.

Once the program is up and running, tasks will shift to supporting program committees, project management, volunteer support, and outreach and education.

RECOMMENDATION: Hire a full time program manager as soon as funds are available.

Funding Requirements

Funding is required to initiate the program, including salary and travel for the program manager, website development and hosting, outreach and training activities and travel for program committees and teams to develop program guidance. Additional funding for project support would further insure success of the critical first projects.

Since the governance recommendation is to house the program within the SAFMC, core administrative funding, such as that used to support staff salaries, must be obtained through NMFS channels. Funding for specific projects may come from various other sources, including competitive programs such as CRP, S-K, MarFin as well as partner organizations such as Sea Grant, state agencies, and ACCSP.

RECOMMENDATION: Pursue short-term funding options for program development and long-term alternatives to ensure its success and sustainability.

Legal and Liability concerns

Collecting, storing, and providing access to data raises potential legal and liability concerns that will need to be addressed during program development. For example, data used for decision making in the Council Management system fall under the requirements of federal laws including the Information Quality Act and the more recent PARR directive that addresses access.

Consideration must also be given to risk management and liability in the event of accidents that may occur during field activities associated with projects supported or endorsed by the Program.

RECOMMENDATION: Agency reviews program SOPPS to ensure compatibility with applicable laws and mandates.

Initial "Kickstarter" project

Workshop participants strongly supported initiating a "kickstarter" project early in the launch of a Citizen Science Program. Initiating a "kickstarter" project could help demonstrate how a project would be administered and implemented in the new Citizen Science program, develop initial interest in a program and serve as an outreach platform, and help showcase the successes of citizen science driven projects.

Recommendations were made to develop criteria for project selection including,

- Identifying a simple, useful project with a high chance of success and broad constituent interest
- Consider a project in which the outcome will not have a direct negative impact on South Atlantic fisheries (i.e., fishery closure) but rather will add to information about the fishery to help support management decisions.
- Establish a process for project solicitation, review, and selection.

RECOMMENDATION: Develop a project selection process in order to initiate a "kickstarter" project.

Miscellaneous topics and recommendations

Advice

- Pilot projects are good.
- Fail early, Fail often: let the program evolve and don't be afraid to try new things.
- Outreach is critical and should be a component at each infrastructure level.
- Training is critical for project participants and managers.
- Hierarchy is required; interests and needs will vary broadly.
- Consider how to foster "matchmaking" for project ideas with scientists needing data connected with citizens who can provide those data and citizens with ideas connected with scientists who can turn them into projects.
- Possibly use a web oriented match-making type platform to connect scientists and citizens.